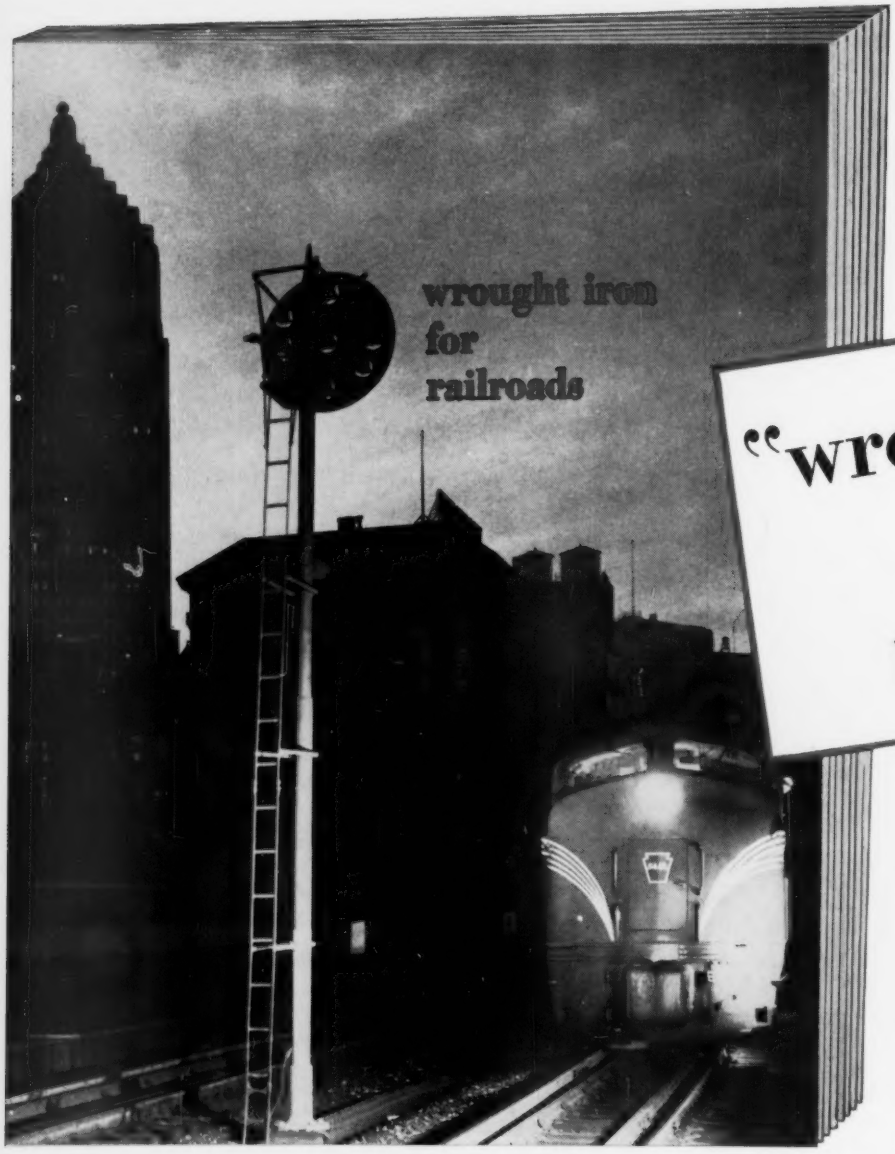
Microwave
REPLACES POLE LINE—P. 32

Tailored Passenger Service . . . p. 29

RAILWAY AGE

JAN. 21, 1957 • THE INDUSTRY'S NEWSWEEKLY



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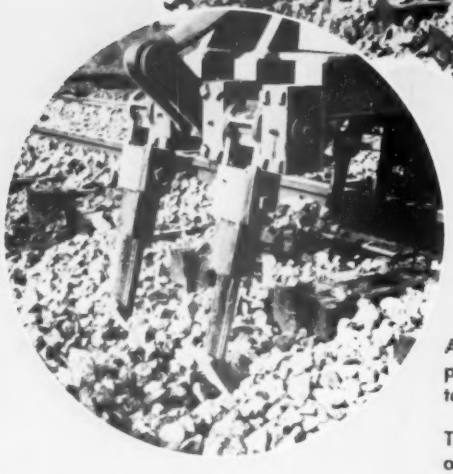

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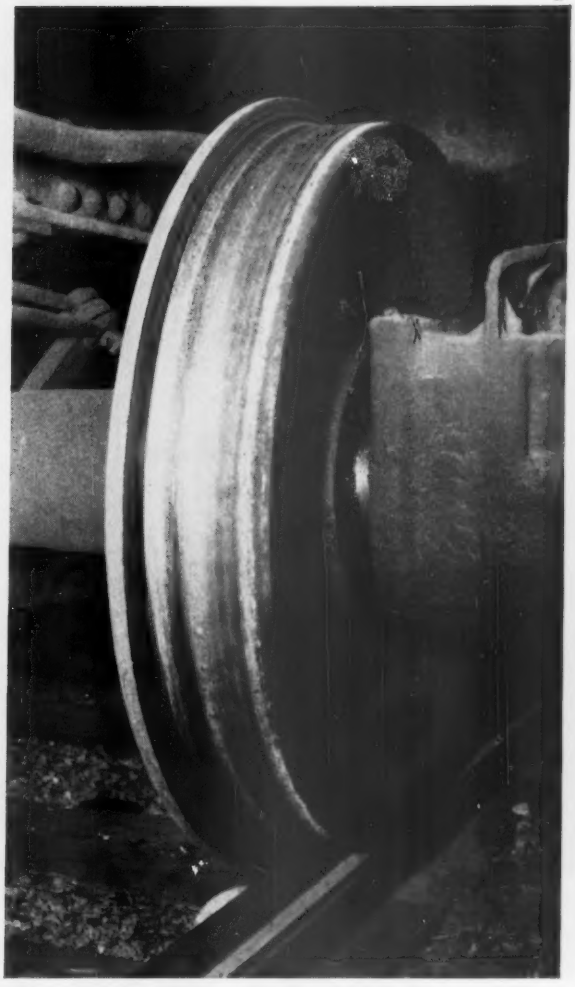

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RAILWAY AGE The Industry's Newsweekly

Vol. 142. No. 3
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PAID CIRCULATION THIS ISSUE 14,516

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Week at a Glance

CPR strike: What did it settle? ..... p. 9

It cost the railroad an estimated $14 million in revenue and the idled employees $7.5 million in wages. As yet, the nine-day strike by the BLF&E—which shut down nearly half of Canada's railroad industry—may only have proved that public opinion seems to be behind management's efforts to control its labor force, at least where locomotive firemen are concerned.

Ike still supports the Cabinet Report p.10

President Eisenhower's budget message advised Congress last week that recommendations of the Cabinet Committee are among proposals which "need earnest and prompt attention with a view to determining whether new national policies should be adopted."

Unloading long rails by 'push' p.24

Strings of continuous welded rail usually are transferred from flat cars to the right of way by pulling the cars out from under them. The D&RGW has developed a technique for pushing the cars ahead as the rails drop down alongside the engine.

One-tracking is possible with CTC p.26

Retirement of 63 miles of second track and 13 miles of sidings, while retaining adequate track capacity and speeding train movements and increasing top authorized speed, is a result of installing modern controlled signaling on the Bessemer & Lake Erie.

The NYC taps its travel potential p.29

New emphasis on equipment, rates and scheduling, highlighted in its timetable revisions last fall, is evidence of this road's new concept of passenger service. Its management declares it intends to stay in the passenger business—and to make it pay.

CALIFORNIA CAR REPAIR SHOP HANDLES MORE CARS AT LESS COST

with RADIO EQUIPPED materials handling vehicles

Servicing nearly 100,000 cars a year with a *minimum loss of time* per unit can be a complicated task—especially with the vast and bulky quantities of materials necessary.

However, the Pacific Fruit Express Company's 130 acre car repair shop and store at Roseville, California accomplishes the job smoothly and efficiently with the help of Motorola 2-way radio. Coordinated by a central dispatcher, the modern, radio equipped materials handling fleet gets the correct materials, in the proper quantities, to the point of use at the proper time.

According to R. C. Nichols, P.F.E. District Storekeeper, some of the biggest advantages of Motorola 2-way radio are:

(1) The dispatcher can direct supply vehicles from job to job, cutting non-productive traveling (or waiting) time to a minimum.

(2) Time and manpower is saved in getting messages quickly to operators of handling equipment.

(3) Supervision is more effective, because decisions on unexpected problems can be made and transmitted in *seconds*.

(4) When a vehicle breaks down, a quick radio call dispatches repair help immediately . . . another call by the dispatcher will send a substitute vehicle to finish the job, so the operation isn't delayed.

(5) Emergency work and special situations call for fast action—radio calls *direct* to vehicles doing routine jobs can switch them to the trouble spot with no lost time.

(6) Any driver can hear messages directed to other drivers. Often one is closer to the job than the one being called, and will volunteer to do the job.

Here is *true teamwork*—the ultimate in efficiency that is *only possible* with 2-way radio contact. Every vehicle does a bigger, better job with less lost motion, and materials handling costs are slashed to rock bottom.

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Current Statistics

Operating revenues, eleven months	
1956	$9,679,887,374
1955	9,248,579,953
Operating expenses, eleven months	
1956	$7,418,974,366
1955	6,946,596,492
Taxes, eleven months	
1956	$1,047,051,241
1955	1,018,671,666
Net railway operating income, eleven months	
1956	$982,530,448
1955	1,050,339,559
Net income, estimated, eleven months	
1956	$777,000,000
1955	828,000,000
Average price 20 railroad stocks	
January 15, 1957	95.9?
January 17, 1956	96.15
Carloadings revenue freight	
One week, 1957	561,519
One week, 1956	611,299
Average daily freight car surplus	
Wk. ended Jan. 5, 1957	15,100
Wk. ended Jan. 7, 1956	5,989
Average daily freight car shortage	
Wk. ended Jan. 5, 1957	1,402
Wk. ended Jan. 7, 1956	1,105
Freight cars on order	
December 1, 1956	119,626
December 1, 1955	109,370
Freight cars delivered	
Eleven months, 1956	60,258
Eleven months, 1955	33,100
Average number railroad employees	
Mid-December 1956	1,017,834
Mid-December 1955	1,070,846

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Week at a Glance CONTINUED

Microwave replaces pole line in snow area p.32

In northern California bitter winter weather breaks line circuits nearly every year, playing havoc with communications. The SP expects 100% reliability with "beamed radio" carrying CTC controls, Teletype, and dispatchers' and telephone conversation circuits.

Crosstie splits are checked with dowels p.35

Life of ties cut from heartwood is materially lengthened by a standard procedure for grading them out for application of threaded dowels at the SP's wood preservation plant.

Welding speeds covered hopper construction ... p.36

The Western Maryland and other roads are benefiting from car builder's use of automatic welding equipment.

Passenger car noise can be controlled p.37

Proper application of absorbent and damping materials of different densities enables engineers to hold interior and exterior noise below objectionable levels, says our contributor, R. A. Donie.

The Action Page—Who are labor's friends? p.46

Managements sometimes accused of seeking to destroy jobs actually are acting in the interest of their employees' long-run job security. If money once used for unproductive labor is diverted to employing people in productive work the interests of the industry and the whole economy are better served.

SHORT AND SIGNIFICANT

North Western commuters . . .

. . . may pass through turnstiles if studies under way by the C&NW are productive. The road is looking into its commuter-service pricing, including the feasibility of zone fares.

Three more railroads . . .

. . . to serve extensions of the Labrador-Quebec iron range are tentatively in the cards. United States Steel, Republic Steel and Javelin are reported to be the firms considering such projects.

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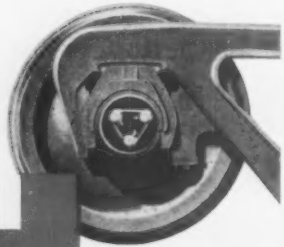
Another GM contribution to railroad prosperity



ONE MORE BIG REASON IS HYATT HY-ROLL BEARINGS for non-stop freight. Hyatts banish hotboxes, one of the major causes of freight train delays. They eliminate time-wasting waits for inspection and lubrication, too, because they have a three-year grease supply sealed in. The new simplified design of HYATT Hy-Rolls makes them so economical to install and maintain that 38 progressive railroads have already adopted them. Roller bearings play a vital part in the multi-million-dollar rail modernization program to make America's freight service *better than ever before!* Hyatt Bearings Division, General Motors Corporation, Harrison, New Jersey.

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HYATT HY-ROLL BEARINGS
FOR NON-STOP FREIGHT

RAILWAY AGE
The Industry's Newsweekly

CPR Strike: What Did It Settle?

In Montreal, a lone picket shivered in the lee of Windsor Station—In Ottawa, Parliament was told a national emergency existed — In communities throughout Canada people wondered if trains would be running before food gave out

The 17,000-mile Canadian Pacific, nearly half the Dominion's railroad industry, had let 2,850 members of the Brotherhood of Locomotive Firemen & Enginemen shut it down.

The dispute had widespread implications: The CPR had become the first American road to engage in economic warfare over whether the locomotive fireman today is an expensive and unnecessary adjunct to dieselization.

What was the issue? Wages? Safety of train operation? The economics of technological improvements? The very existence of a major rail union?

The CPR had agreed to give its firemen a raise; no fireman who wanted a job would be without one—or would even suffer reduction of pay or loss of seniority; there was severance pay for those who chose to leave.

The brotherhood shouted that the issue was safety, but railroad officers both on and off the CPR were adamant that it wasn't. The CPR pointed out that it intended to operate only yard locomotives with one man in the cab; road engines both in freight and passenger service would still have two. A yard engineer, moreover, could move his diesel only in response to hand signals from a crew member on the ground. Besides, studies had shown no relation between train accidents and the number of men in the cab.

But, said the union, the U.S. railroads—and the Canadian National as well—had acknowledged the need for diesel firemen and had stopped trying to remove them from the cab. A Vancouver [B.C.] newspaperman took up the matter with Daniel P. Loomis, chairman of the joint Carrier Conference Committees (and of the Association of Western Railways).

True, Mr. Loomis said, U.S. railroads had demanded early in 1956 that they be given the right to determine when firemen would be used on diesels, and then later had withdrawn their demand. They had pulled back, he declared, not on the safety issue but to win concessions from the firemen's union. He didn't elaborate on the concessions, but the Canadian press took him to mean the three-year moratorium on wage and rules changes already agreed to by the non-operating unions—"three years of peace on American railroads."

CNR Settled.—True, too, the Canadian National had filed substantially the same demand along with the CPR, and then signed a two-year contract last spring without touching what later became the "hot potato."

But the CNR left the matter on the bargaining table, as did U.S. roads, and today it applauds the Canadian Pacific for its contention that men shouldn't—indeed can't, under present financial conditions—be hired to do unproductive jobs.

The CPR's reason for sticking to its demand—and for accepting the strike—is that it wants a determination now of the extent to which its future financial statements can reflect the savings in wage costs brought on by modern operating techniques.

The union's reason for putting up the battle—which is far from over—is that the BLF&E can justify its existence only if railroads employ locomotive firemen. If the fireman is to go the way of the wood-passer and the back-shop boilermaker, the union as it exists today must go too.

When the firemen's union began its wage drive on Canadian roads last February, it apparently treated lightly the carriers' proposal that railroad managers have the right to employ diesel firemen at their discretion. For that matter, the union never has considered the demand negotiable, and wasn't prepared at the outset of subsequent hearings to oppose it.

The "diesel issue" was the most provocative of demands made to counter those of the union for a 25% wage increase, for more liberal pensions, holiday pay, and the assignment of firemen to Budd RDC cars.

The Canadian National settled in March for a staggered 11% increase and improvements to fringe benefits.

Board Appointed.—The CPR and the brotherhood, however, couldn't agree, and in April they applied separately to the Minister of Labor for a conciliation board (the approximate counterpart of a U.S. Presidential emergency board).

The board—a judge as chairman, a Liberal senator as union nominee and a lawyer as CPR nominee—heard 4,300 pages of evidence between June and November. The "die-

NO TRAINS—The board at Montreal's Windsor Station neatly summed it up.

sel issue" got most of the attention.

The CPR sought to demonstrate how, beginning with the wholesale purchase of diesels in 1949, the job of locomotive fireman changed—how his historical task of tending the boiler, firebox and lubricator had dwindled to the job of "assisting the engineer" (which usually meant nothing), and, on passenger units, keeping an eye on the remote controls of the steam generator.

Its firemen aren't encouraged to "patrol" the diesel units and they have no responsibilities under the hood, the CPR said. Indeed, when dieselization is complete in 1961, only 16% of the CPR's units will be of the carbody type which even permit running inspection of the mechanism. Most units will be road-switchers, and they won't have catwalks between them.

Declared the CPR: The skilled fireman of steam days is, in fact, a worker who, through no fault of his own, can no longer perform a useful task. He need not be hired to ride on a freight engine or a switcher; what work there is on a passenger diesel could be handled by a semi-skilled "helper" paid at the rate of $7 per basic day of 100 miles (which union Vice-President W.E. Gamble said was $3 a day less than is paid a man who sweeps roundhouse floors).

(Continued on page 43)

Ike Still Supports Cabinet Report

Budget message also calls for continued spending on transport facilities competitive with railroads—User charges on airways are recommended again

President Eisenhower's budget message advised Congress that recommendations of the Cabinet Committee Report on Transport Policy and Organization are among proposals which "need earnest and prompt attention with a view to determining whether new national polices should be adopted."

The message went to Capitol Hill January 16. The accompanying budget for the fiscal year ending June 30, 1958, proposed expenditures totaling $72 billion, including funds for operations of the Interstate Commerce Commission and further outlays for transport facilities competitive with railroads.

In the latter connection, the President recommended, as he has before, that user charges be established on the airways.

The Cabinet Committee program was before Congress last year, but no action was taken on it. The program includes rate-freedom proposals designed to give railroads and common carriers generally more leeway to adjust competitive rates. These proposals are regarded by railroads as the "heart" of the program, but they are opposed by the ICC, the trucking industry and water carriers.

The Cabinet Committee also made various other recommendations, which the railroads, while regarding the rate-freedom plan of "greater immediate importance," support in principle. Included in those other recommendations are proposals to bring under regulation for-hire carriage which is being performed under the guise of private carriage, to sharpen the definition of contract carriage, to repeal the exemption from regulation now enjoyed by water carriers of commodities in bulk, and to give the ICC authority to over-ride state commissions to permit abandonment of unprofitable railroad services.

The budget message recalled that legislation to carry out these recommendations was the subject of Congressional hearings last year. The President then added: "Because of the importance of strengthening our transportation system, these hearings should be completed in the present session. Proposals for legislation will again be submitted by the Secretary of Commerce." This secretary, Sinclair Weeks, headed the Cabinet Committee.

The user-charge proposal came after the message had summed up the budget's proposals for fiscal 1958 spending on federal aids to aviation. The total was put at $464 million, 85% above the amount spent in the latest

Brazil Dedicates First of Its New GE Diesels

President Juscelino Kubitschek of Brazil (with upraised hand), at recent dedication ceremonies in Sao Paulo for first of 45 720-hp diesel-electric locomotives built for the Santos a Jundiai Railway by the General Electric Company. The locomotives, ordered last year (Railway Age, June 25, 1956, p. 9), will operate between Sao Paulo and the coffee seaport of Santos. With President Kubitschek are Janio Quadros, governor of the state of Sao Paulos; Renato Feio, director of the railroad and one of South America's outstanding railroad engineers; and directors of General Electric, S.A.

full fiscal year which ended June 30, 1956. "Government aids to aviation," the President said, "confer substantial special benefits upon users of air space. As the cost of providing these benefits rises, it becomes increasingly appropriate for the users to share the cost with the general taxpayers.

Except for direct federal construction, such as forest roads, the federal-aid highway program is now financed from the highway trust fund set up when the $33 billion program was approved last year. Expenditures from the trust fund in fiscal 1958 are expected to total $1.7 billion, and "are expected to rise gradually in later years to nearly $3 billion annually," the President said.

As to waterways, he recommended that the Army's Corps of Engineers be given funds to start seven new navigation projects. Six of them are proposed harbor improvements and the other is a lock-and-dam project on the Monongahela river.

Meanwhile, as the President put it, "construction of the St. Lawrence seaway will go forward." To meet increased construction costs and provide for additional dredging work not originally contemplated, he will propose legislation to give the St. Lawrence Seaway Development Corporation authority to borrow an additional $35 million.

The President also will propose legislation to increase postal rates to the point where they will yield an additional $654 million a year. He said: "We should not let another year go by without taking the necessary action to place the Post Office on a pay-as-you-go basis. The case for adjusting postal rates needs no further justification. It is supported by a vast majority of the general public as well as by most of the business community."

For the ICC, the budget proposes a fiscal 1958 appropriation of $17,500,000. That would be $2,620,304 more than the $14.879.696 which the commission got for the current fiscal year.

The appropriation would be on a lump-sum basis, but some of it would nevertheless be earmarked for specific activities. Not less than $1,363,500 and not less than $956,600 would have to be spent, respectively, for railroad safety work and for locomotive inspection activities.

PRR Picks 'Pioneer' for M-U Replacement

Budd-developed lightweight cars will be used in the road's commuter service—Order for six units, with option on 44 more, follows 50,000 miles of experimental operation

A $1,500,000 order for six 132-passenger multiple-unit commuter coaches has been placed with Budd by the Pennsylvania.

The cars will be a development of the Budd "Pioneer III" design which was unveiled last summer. Budd's first car of this type has been in test service since then on the PRR between New York and Washington.

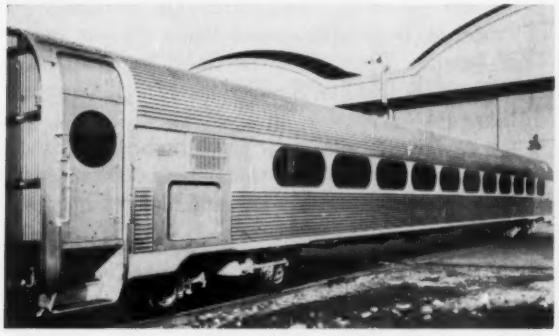
The PRR announced that its order for six cars, to be delivered about next December, was accompanied by an option on 44 duplicate units. Studies will be made of customer reaction and operating results when the first six cars go into service so that further improvements can be made in the design of the additional cars. The 50 cars are expected to cost $9,000,000. This could be the first step in the eventual replacement of the 471 electric motor cars and 45 trailers now used by the road for suburban and interurban operations in the New York, Philadelphia, Baltimore and Washington zones.

"We expect our new suburban cars to be the finest equipment for commuter service in use anywhere," W. W. Patchell, PRR vice president—research and development, said in announcing the order. "We hope eventually to replace most of the older cars in our suburban service and to operate our commuter service with maximum efficiency. In this way we hope not only to increase commuter patronage, but also to reduce railroad operating costs and to cut our losses in this service."

Each of the new stainless-steel cars will be equipped with outboard disc brakes and will be powered with four newly designed electric traction motors. These motors will accelerate the car—which Budd estimated would weigh 83,300 lb—from a standing start to 30 mph in 25 seconds.

The 132 passengers will be seated in reversible seats arranged to accommodate three passengers on one side of the aisle and two on the other. The cars will have pastel-colored, plastic-faced interiors and fluorescent lighting. They will be completely air conditioned, and will have thermostatically controlled electric heating.

The first "Pioneer III" car—prototype for this new order—has been *(Continued on page 14)*



'PIONEER III' for PRR's M-U service will have vestibules at both ends with operator's windows and cab controls. The 85-ft length and low profile of the original car (left), will not be changed. The road's present M-U operations

are now conducted with 72-seat coaches (right). Three of the new cars should have a seating capacity only slightly less than that of the present day six-car trains which operate over much of the PRR's electrified zone.

USS Quality Trackwork on the job

These two USS manganese steel insert crossings have been taking a steady beating from heavy-duty freight and high-speed passenger traffic for several years. Nevertheless, they are still in good condition —further proof of the dependable, long-term, trouble-free service which can be obtained from well-made USS manganese steel insert crossings.

The two-rail, 49°-angle crossings shown are located in Central Ohio where three tracks of the Pennsylvania Railroad cross the double track of the Cleveland, Cincinnati, Chicago and St. Louis Railway (southern district of the New York Central).

USS Quality Trackwork products possess an inherent strength and hardness that give them long life and result in greatly reduced maintenance. The extra care and effort that goes into the manufacture of switches, frogs and special track layouts make USS Quality Trackwork the finest you can buy. Specify USS Quality Trackwork for all your requirements.

For further details, write to United States Steel, 525 William Penn Place, Pittsburgh 30, Pa. Also, you are invited to contact our engineers at any time for assistance in design.

USS TRACKWORK

UNITED STATES STEEL CORPORATION, PITTSBURGH • COLUMBIA-GENEVA STEEL DIVISION, SAN FRANCISCO
TENNESSEE COAL & IRON DIVISION, FAIRFIELD, ALA. • UNITED STATES STEEL EXPORT COMPANY, NEW YORK

7-247

MARKET OUTLOOK THIS WEEK

Freight Car Loadings

Loadings of revenue freight in the week ended January 12 totaled 680,766 cars, the Association of American Railroads announced on January 17. This was an increase of 119,247 cars, or 21.2%, compared with the previous week; a decrease of 29,572 cars, or 4.2%, compared with the corresponding week last year; and an increase of 40,933 cars, or 6.4%, compared with the equivalent 1955 week.

Loadings of revenue freight for the week ended January 5 totaled 561,519 cars; the summary, compiled by the Car Service Division, AAR, follows:

REVENUE FREIGHT CAR LOADINGS
For the week ended Saturday, January 5

District	1957	1956	1955
Eastern	91,392	104,064	100,395
Alleghany	115,099	123,801	109,324
Pocahontas	45,448	50,967	48,855
Southern	106,801	117,860	116,294
Northwestern	60,354	65,221	68,621
Central Western	95,810	99,550	103,257
Southwestern	46,615	49,796	50,606
Total Western Districts	202,779	214,607	222,484
Total All Roads	561,519	611,299	597,352
Commodities:			
Grain and grain products	42,886	41,178	43,821
Livestock	5,218	7,706	8,520
Coal	106,031	129,282	116,845
Coke	12,403	13,031	9,622
Forest Products	33,677	38,925	39,006
Ore	20,372	17,362	15,594
Merchandise l.c.l.	42,139	48,106	55,902
Miscellaneous	298,793	315,709	308,042
January 5	561,519	611,299	597,352
	1956	1955	1954
December 29	487,546	570,412	529,386
December 22	698,389	667,479	561,195
December 15	716,652	709,132	641,879
December 8	373,757	721,518	653,531

IN CANADA.—Carloadings for the ten-day period ended December 31 totaled 74,977 cars, compared with 77,280 cars for the previous seven-day period, according to the Dominion Bureau of Statistics.

	Revenue Cars Loaded	Total Cars Rec'd from Connections
Total for Canada:		
December 31, 1956	74,977	40,153
December 31, 1955	81,996	41,038
Cumulative Totals:		
December 31, 1956	4,402,581	1,740,929
December 31, 1955	4,064,909	1,647,236

New Equipment

FREIGHT-TRAIN CARS

► *Macon, Dublin & Savannah.*—Ordered 50 70-ton covered hopper cars, ACF Industries, at estimated cost of $440,000; delivery expected in third quarter 1957.

► *Seaboard Air Line.*—Ordered 12 special bulkhead 50-ton flat cars, Greenville Steel Car, at approximate cost of $125,000; delivery is scheduled for July 1957.

LOCOMOTIVES

► *Belt of Chicago.*—Ordered one 900-hp diesel-electric switching unit, Alco Products, for delivery next month.

► *New Zealand.*—Bids have been invited until March 27 for supply of 18 diesel-electric switching locomotives, according to Foreign Commerce Weekly; specifications are available, at $28 a set, from New Zealand Government Trade Commissioner, 1145 19th street, N.W., Washington 6, D.C.

PASSENGER-TRAIN CARS

► *Hudson & Manhattan-Pennsylvania.*—Ordered 50 air-conditioned cars to be used in Hudson Rapid Tubes between Newark, N.J., and Hudson Terminal, N.Y.; cars will be built by St. Louis Car Company; thirty, at cost of $2,563,788, will be paid for by PRR, and 20, costing $1,675,272, will be paid for by H&M; each car will be 51 ft long, three feet longer than cars now in service, and will replace equipment mostly 44 and 45 years old (Railway Age, July 30, 1956, p. 9).

► *Pennsylvania.*—Ordered six 132-passenger, new-type commuter coaches developed by Budd Company, cost $1,500,000, and took option on 44 more; total cost of 50 cars will approximate $9,000,000; cars, based on Budd's "Pioneer III" development (Railway Age, July 23, 1956, p. 38), which has undergone 55,000 miles of PRR testing, will be designed for use exclusively in commuter services; delivery of first six is expected about December 1957 (see page 11).

SPECIAL

► *Brazil Will Have Monorail System.*—City of Sao Paulo, Brazil, will install 63-mile monorail system ordered from Alweg organization in West Germany; cost reportedly will approximate $150,000,000; plans now call for 124 stations; 30.5 miles of system will be elevated, 23 miles will be at surface level, eight miles will be subway, and 1.5 miles will be tunnel.

New Facilities

► *Denver & Rio Grande Western.*—Railway machinery and tools, including six specially designed hydraulic tampers for use by small section gangs, will cost $152,000 in 1957.

MASS TRANSPORT ONLY WAY TO KEEP BIG CITIES ALIVE

"Socially, the rails are the right answer" to the mass transportation problems of metropolitan centers, according to E. G. Budd, Jr., president of the Budd Company.

Without debating issues of pricing and economies involved, Mr. Budd told the New York Society of Security Analysts recently that mass transport is the only way to keep the nation's big cities alive. "It's a need," he declared, "that cannot be solved any other way except by mass transportation."

Mr. Budd, challenging municipal planning that relies on vast superhighway networks, said existing rail facilities of trackage, right-of-way and center-city terminals offer the best method of moving masses of people into urban centers and home on a daily basis.

Mr. Budd, referring to ICC reports showing a growth in commutation traffic, said that "society has to depend on the railroads."

As to equipment, Mr. Budd said that his company is "proudest of" the development of the "Pioneer III" prototype among its 1956 accomplishments.

This car is the "ultra-refinement, structurally," of low-slung railway equipment, Mr. Budd asserted. It is "completely proven," he said, and should not be considered "a trick car in any way."

He pointed to the "Pioneer III" tests on the Pennsylvania, and said the car "accomplishes the weight per seat" which has been held necessary for succesful passenger operations, without sacrificing interchangeability or other vital features.

Budd's tubular train, Mr. Budd went on, amounted to the "half-way step" in weight reduction, while development of high-level cars for the Santa Fe satisfied another need.

Introduction of the "Slumbercoach" for the Burlington, Mr. Budd said, represented an effort to "get sleeping accommodations at coach prices" and added the car will be a "valuable new tool" for railroads in the future.

As to passenger business in general, Mr. Budd said each mode will find its own level in the overall scheme. He noted that some roads profit while running the most expensive equipment on transcontinental "cruise" schedules, and he was particularly optimistic for railroad service between close cities of large size.

(Continued from page 11)

in operation almost daily since last August over the PRR line between New York and Washington. It has been operated coupled with the Budd-built tubular "Keystone," which makes two daily round trips. During this service testing, "Pioneer III" has not hauled passengers, but it has accumulated well over 50,000 miles of operation.

Prior to its public announcement of the "Pioneer III" last July, Budd had subjected the car to laboratory and road testing. In the laboratory, compliance with AAR and RMS buffing load requirements were confirmed.

There were lengthly laboratory fatigue tests on the welded truck frame. These tests were conducted on a special machine arranged to subject the truck to maximum vertical and lateral loads, and to put the truck through 2,000,000 loading cycles similar to those it would encounter in service. Cold room tests showed a 9-ton output for the Safety air conditioning unit and showed that the air flow pattern kept windows from frosting and did not develop cold drafts around passengers.

The car was operated for approximately 3,500 miles on the Pennsylvania-Reading Seashore Lines between Camden, N.J., and Wildwood. During this time the Franklin Institute's analog computer calculations on its riding characteristics were confirmed in actual service. Some experimenting was carried on with the air spring suspension, and the tests led to one mechanical change in the spring arrangement.

Following its first public showing in New York in mid-July 1956, "Pioneer III" began over four months of intensive road tests in the "Keystone" service between New York and Washington. By the end of November it had operated over 50,000 miles. It was withdrawn from the service for complete inspection at the Budd plant to determine if further mechanical changes were necessary.

During the four months of road service there was some difficulty with bushings in the brake system, which had been corrected by installation of formica bushings. On two occasions there were undesired brake applications on the car caused by a sticking triple valve. The car is equipped with New York Air Brake's LWE equipment, and it is necessary to use a standard triple valve in conjunction with this equipment when the car is handled in a train with conventional brakes. Neither mechanical defect was serious and Budd has taken corrective steps.

Budd has been well satisfied with the "Pioneer" riding characteristics, and tests have shown that the car's riding qualities are better than those of the Pennsylvania's best-riding conventional equipment. Decibel readings show that this car has about the same noise level as the more conventional "Keystone" cars.

Inspections at the Budd plant showed that there has been no wear in the air spring assemblies. Tread and flange wear were neglible during the four months of service.

At the beginning of the new year the "Pioneer III" went back into service on the "Keystone" run between New York and Washington. At the end of January it is to be transferred to a Pittsburgh-Chicago run.

ICC Receives 22% Rate-Hike Plea

Supplemental petition by eastern and western roads requests that final decision in Ex Parte 206 case authorize increases raising by 22% the rates in effect December 27

The Interstate Commerce Commission is now formally advised that eastern and western railroads are seeking freight-rate increases that will amount generally to 22%, including the interim advance which became effective December 28, 1956. The advice came in an amended petition filed in the Ex Parte 206 case.

The supplemental petition confirmed what the eastern and western roads had said after the commission announced that it considered the interim proposal as part of the 15% originally sought (Railway Age, Dec. 3, 1956, p. 8).

As to the interim increase, the 7% sought on that basis was approved only for application to eastern intraterritorial rates. The increases within western territory and on interterritorial rates were held to 5%, and the commission also imposed more hold-downs and exceptions that the petitioning roads proposed (Railway Age, Dec. 24, 1956, p. 6).

The supplemental petition asks that the final decision in the case authorize increases which, generally, will raise **by 22% the rates in effect December** 27, 1956 (the day before the interim advance became effective). Several exceptions and hold-downs are proposed.

The exceptions include coal and coke, where increases of 15 and 10 cents would apply on coal, both anthracite and bituminous, moving to **tidewater for transshipment** to destinations outside the United States.

The hold-downs (maximum limits on the percentage increases) would be as follows: 27 cents per 100 lb on fresh and frozen fruits and vegetables, and canned or preserved food products; 18 cents per 100 lb on sugar and on lumber and articles listed in tariffs as taking lumber rates.

The 22% would apply to accessorial charges generally. Exceptions, where no increases are proposed, would apply to charges for loading or unloading livestock, wharfage, handling, tippling or dumping charges at Hampton Roads, Va., ports, charges for transferring coal from cars to vessels at ports on Lake Erie or Lake Ontario, and charges for storing iron ore at lower Great Lakes ports.

As to competitive rail rates, the petitioning carriers, as they put it, "do not at this time propose to increase rates between competitive points also served by non-petitioning railroads, unless said non-petitioning railroads shall increase their rates between said points."

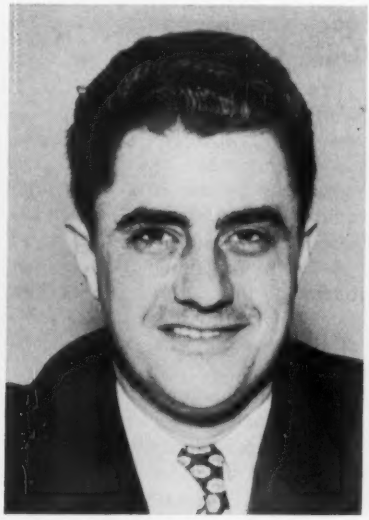
If fully applied, the proposed increases would yield something like $1,636,000,000 a year, including the annual-basis yield of $436 million already being realized from the interim increase. The supplemental petition estimates that the eastern roads, including the Pocahontas lines, would have a 6.08% return on net investment while the return of the western roads would be 6.11%.

Southern Case—Meanwhile, the commission has before it the petition of southern roads for a 7% increase to offset higher costs and obtain funds to continue their capital improvement programs.

Hearings and oral argument on that phase of the Ex Parte 206 case were concluded in Washington January 11.

The southern lines are not parties to other phases of the case. They did not subscribe to the 15% petition filed originally by the eastern and western roads, and they are not parties to the supplemental petition which undertakes to bring the eastern-western increase up to a total of 22%, as noted above.

D. V. Fraser



William N. Deramus III

E. T. Reidy

Executives Shift on Katy, Great Western

D. V. Fraser, elected chairman of the M-K-T, is succeeded as president by W. N. Deramus of the CGW—E. T. Reidy becomes president of the Great Western

The first big executive shift of the new year has brought new presidents to two Midwestern railroads.

In a quick three-way switch, D. V. Fraser, president of the Katy since 1945, moved up to fill the vacant post of board chairman; William N. Deramus III resigned as president of the Chicago Great Western and was elected the Katy's chief executive to succeed Mr. Frazer; and E. T. Reidy, vice-president and general manager of the CGW, stepped up to president and chairman of the executive committee of his road.

The change came on January 8. Rumors of such a change on the Katy had been circulated in St. Louis last fall. Financial circles about the same timed buzzed with reports of a possible Katy-Great Western merger.

Merger Talk—As of last week the merger talk was pretty well quashed. Following Mr. Deramus' election to the presidency, Katy spokesmen denied that any merger was in prospect.

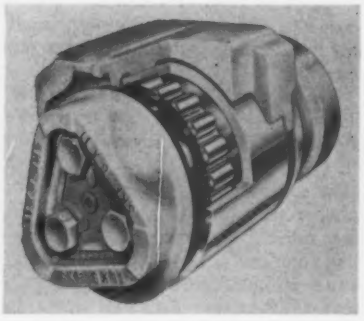
Robert E. Thomas, president of Pennroad Corporation and chairman of M-K-T's executive committee, said there now are "no plans" for merging the roads, but that no avenue for possible improvement of Katy fortunes has been ruled out.

The Katy hit a few rough spots in 1956, with net estimated around $2 million, off around a third from

(Continued on page 39)

RAILWAY AGE
The Industry's Newsweekly

WHAT'S NEWS in Products



Freight Car Roller Bearing

A removable General Purpose Freight Car Bearing has been designed to reduced maintenance costs by permitting fast inspection and quick repairs without the need of expensive special equipment.

For inspection, the outer race assembly of the bearing is dismounted by hand while the inner race and enclosure collar, which are fitted to the axle, remain in place. The self-lubricating seal has several holes drilled between the lips of the seal. Besides providing an air vent, this design furnishes a means of disposing of excess lubricant, and uses this grease to lubricate the surface between the seal and the axle cap.

A one-piece inner race carries the cylindrical rollers. With this one-piece inner race, only two bearing parts are pressed on the car axle — the inner race and the enclosure collar. The bearing itself consists of four parts, and only three touch the axle. The unit comes completely assembled, pregreased for three-year service, boxed and mounted on pallets in car sets of eight bearings.

With this packaging, the bearing is mounted directly from the shipping box. After the bearing has been placed on the pilot shaft, the box is slipped off.

This roller bearing is adaptable to all car frame and freight car bearing standards set by the AAR. Now undergoing laboratory and field tests, the bearing is also available in a "free lateral" design. This design provides lateral freedom between the rollers and the outer race shoulder of the bearing. *SKF Industries, Inc., Dept. RA, Philadelphia* •

Steel-Reinforced Grain Door

This steel-reinforced grain door reportedly can be installed by one man in five minutes. It consists of heavy reinforced paper supported horizontally by two steel beams and vertically by four wide, steel slat-braces. A 2-in. square pryboard and a 1 by 6 in. climb-out board are attached to the reinforced paper with heavy duty metal stitches. The vertical slat-braces are similarly attached to the paper.

The combination of horizontal and vertical bracing minimizes the outward bulges caused by the grain which could otherwise interfere with opening and closing box car doors and possibly even spring these doors. Damage to car door posts, walls and doors is reduced because only five nails per post are used to install the door. After the car is unloaded, the door comes down in one piece in the same way as it was installed, and the car is left clean.

The horizontal steel beams are reusable and provide a ladder for inspectors and samplers to examine the contents of a grain car. The door is shipped in two parts—the steel beams and the assembled grain door roll. The latter includes lumber, nails and lath ready for immediate installation. The pry-board, climb-out board and beams all have predrilled nail holes to help speed installations.

These doors are manufactured in standard height for regular 6-ft openings. A higher door is available for shipment of malt and other more bulky commodities. Both doors will be available for wider box cars openings. *Acme Steel Company, Dept. RA,* 2840 *Archer ave., Chicago* 8 •

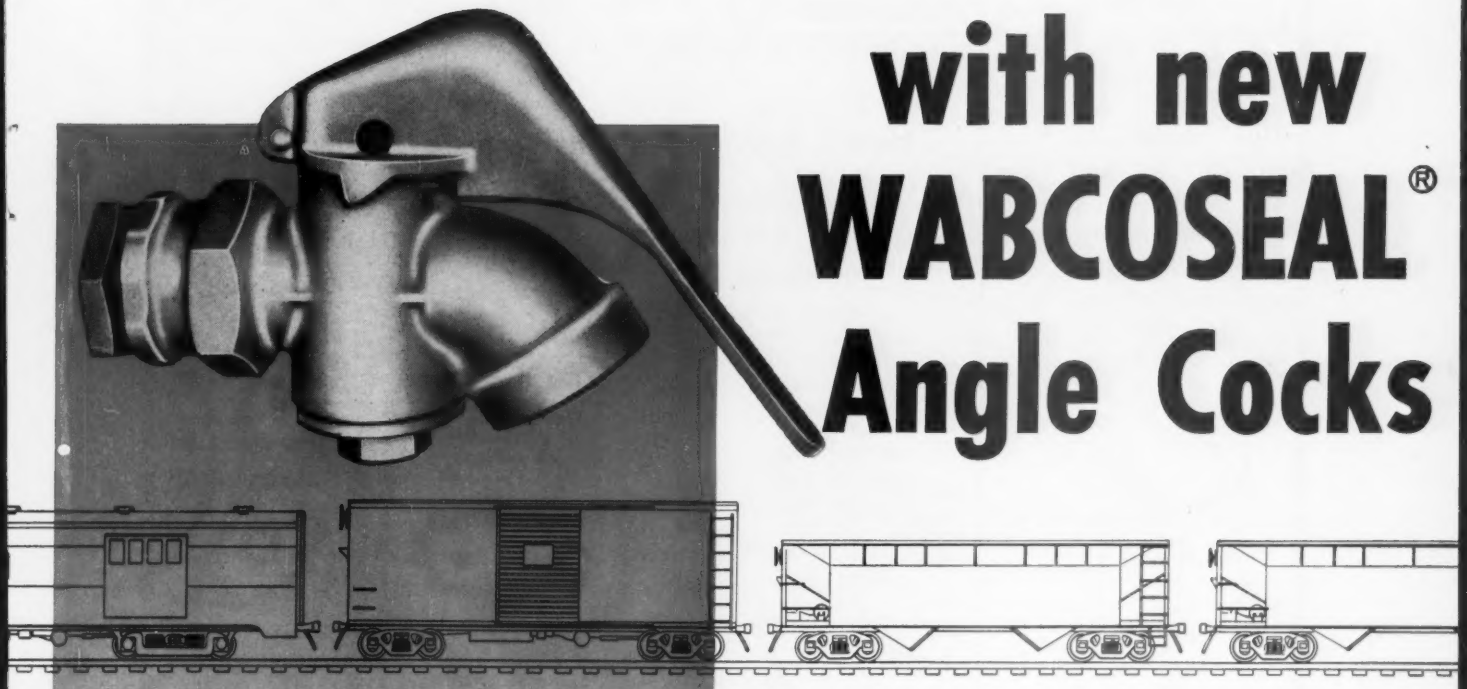
Fire Extinguisher

The Ever-Ready dry chemical tube fire extinguisher is said to extinguish any small fire when its contents are thrown into the base of the flame. The chemicals release a high percentage of extinguishing gases when in contact with the fire.

The cardboard tube is 2 in. by 18 in. and contains 2½ lb of chemicals.

The tubes are packed 20 to a carton. The chemicals are said not to deteriorate with age. Reportedly will not cake, pack or freeze, are not poisonous, and will not corrode or damage delicate machinery or fine fabrics. The chemicals are available in 30 lb pails with cover and hanging bracket. *Geo W. Diener Manufacturing Company,* 400-420 *N. Monticello Ave., Chicago* 24; *distributed to railroads through Railway Products Corporation, Dept. RA,* 4427 *W. Kinzie St., Chicago.*

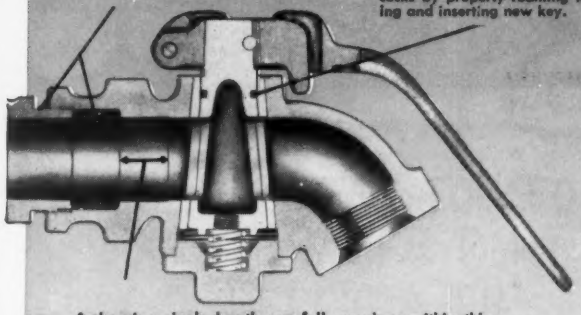
Stop those air leaks with new WABCOSEAL® Angle Cocks



FOR FREIGHT CARS:

Wabco compression ring grips pipe when nut is tightened to provide tight seal and strong clamping action.

"O" ring seals the key effectively through a wide degree of key wear. This seal can be used on old angle cocks by properly reaming the bushing and inserting new key.



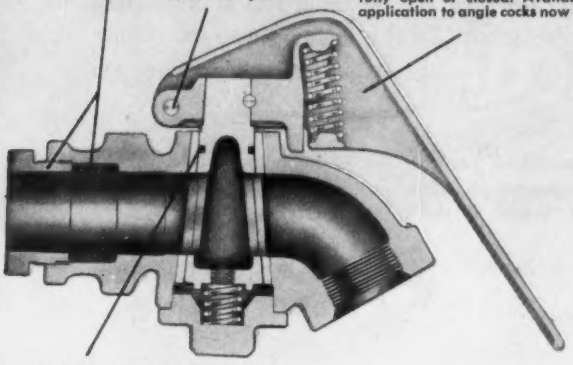
Brake pipe nipple length can fall anywhere within this range and still be perfectly sealed. Threaded nipple is not necessary but can be used if more convenient.

FOR PASSENGER CARS AND LOCOMOTIVES:

New Wabcoseal fitting is same as for freight car angle cock shown above.

Shouldered pin

Strong spring is compressed when handle is raised. Socket is snapped into locking position when handle is fully open or closed. Available for application to angle cocks now in use.



Sealed key is identical to freight car angle cock key shown above.

GEARED TO PROGRESS
P R I
MEMBER

DON'T tolerate a high air leakage rate on your trains. Use the new Wabcoseal Angle Cocks for tighter seals.

The sealed key is new, with an "O" ring seal that stays tight through a wide range of key wear.

The brake pipe connection is new. A rugged Wabco compression ring replaces the old tapped thread. Tolerance for length of pipe nipple is now provided.

The spring-locking handle is new for passenger cars and locomotives. When the handle is removed to fully open or closed position a strong spring snaps the socket into locked position and keeps it there. A shouldered pin provides proper freedom of handle movement.

The sealed key and spring-locking handle are available for application to present angle cocks. See your Westinghouse Air Brake representative for more information.

Westinghouse Air Brake
COMPANY

AIR BRAKE DIVISION WILMERDING, PA.

Questions and Answers

Of current interest

to the Transportation Department

How would you load these cars so that they would be at—or close to—home when they reached the consignee . . .

?

CONDUCTED by G. C. RANDALL, district manager, Car Service Division (ret.), Association of American Railroads, this column runs in alternate weekly issues of this paper, and is devoted to authoritative answers to questions on transportation department matters. Questions on subjects concerning other departments will not be considered, unless they have a direct bearing on transportation functions. Readers are invited to submit questions, and, when so inclined, letters agreeing or disagreeing with our answers. Communications should be addressed to Question and Answer Editor, Railway Age, 30 Church Street, New York 7.

Here's Another Railway Age Car Service "Quiz."

A lumber mill, located on a Southern Pacific branch out of Portland, Ore., on a recent day had orders for the following destinations, all requiring box cars:

Asheville, N. C.
Birmingham, Ala.
Denver, Colo.
Detroit, Mich.
Evansville, Ind.
Little Rock, Ark.
Louisville, Ky.
Los Angeles, Cal.
Milwaukee, Wis.
Mobile, Ala.
Phoenix, Ariz.
Springfield, Mass.
St. Louis, Mo.
Toledo, Ohio
Washington, D. C.

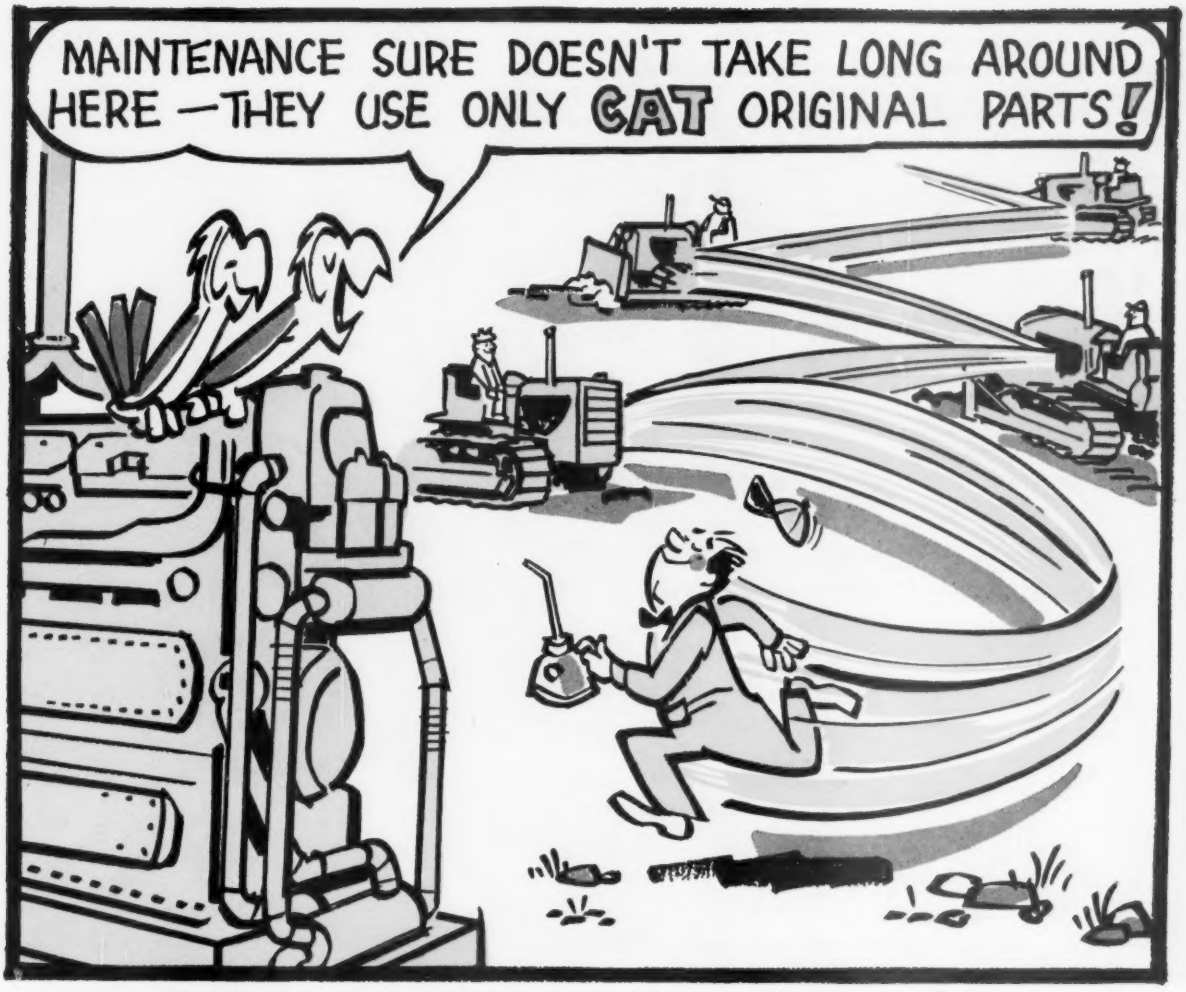
The local freight serving this mill brought it the following cars to be loaded (one of each railroad's ownership):

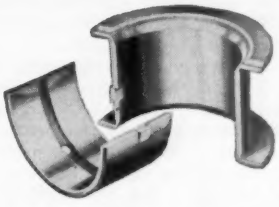
Akron, Canton & Youngstown (AC&Y)
Atchison, Topeka & Santa Fe (AT&SF)
Chicago, Burlington & Quincy (CB&Q)
Delaware & Hudson (D&H)
Denver & Rio Grande Western (D&RGW)
Erie
Georgia (GA)
Louisiana & Arkansas (L&A)
Norfolk & Western (N&W)
Nashville, Chattanooga & St. Louis (NC&StL)
Norfolk Southern (NS)
Soo Line (Soo)
Southern Pacific (SP)
Tennessee Central (TC)
Texas & Pacific (T&P)

Through the educational efforts of the Southern Pacific, the mill people were generally familiar with the provisions of the Car Service Rules and used regularly the Car Selection Chart distributed by the railroad. As a result, these cars were applied in accordance with the Car Service Rules. In each case, then, the car on arrival at destination was either (1) on the owning road; (2) at a junction with the owner; or (3) within 200 miles of a junction with the owner. Can you do as well?

Here's the quiz I promised you recently. I hope many of you will send me your answers. We'll print, in the March 4 issue, the names of everyone who "loads" all the cars properly.

Mail your answers by February 15, addressed to me at Railway Age, 30 Church st., New York 7, N. Y. Good luck.—*G.C.R.*





An engine bearing—not big, but mighty important. If it's a CAT* bearing, it's an *exclusive combination* of aluminum alloy—extra strong with just the right degree of hardness. But if it's a "look-alike" bearing—who knows?

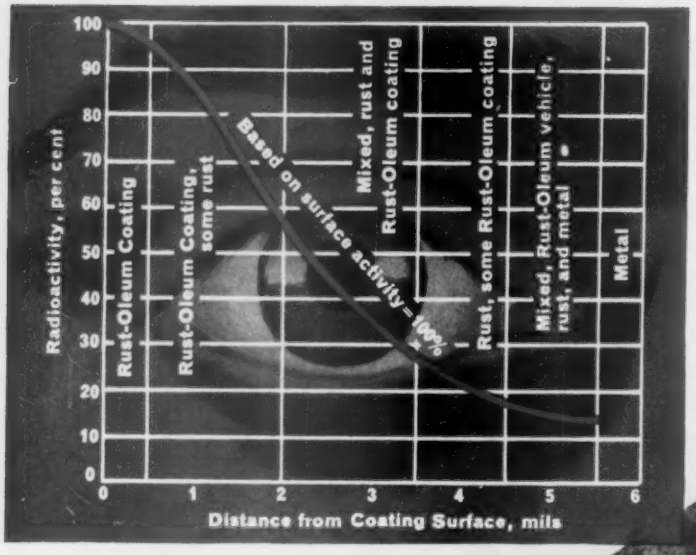
And remember, your Caterpillar Dealer will carry your inventory of Cat original parts. Ask his Parts Representative about it.

Caterpillar Tractor Co., Peoria, Illinois, U. S. A.

CATERPILLAR*

*Caterpillar and Cat are Registered Trademarks of Caterpillar Tractor Co.

See Rust-Oleum *penetrate* *rust* to bare metal through the "Eyes" of Radioactivity!



Curved line illustrates Rust-Oleum penetration through rust at each mil level as recorded by Geiger Counter.

Rust-Oleum dries to a firm, decorative coating that resists salt water, sun, fumes, heat, humidity, and weathering.

Geiger Counter traces Rust-Oleum penetration to bare metal! In nearly three years of radioactive research, Rust-Oleum's *specially-processed* fish oil vehicle was radio-activated and formulated into Rust-Oleum 769 Damp-Proof Red Primer — then applied to rusted test panels. Rust-Oleum's specially-processed fish oil vehicle was then traced through the rust to bare metal by Geiger Counter.

This penetration means rust-stopping power, because the fish oil vehicle works its way into the tiny pits in the metal where it drives out air and moisture that cause rust. Important savings are yours, because Rust-Oleum can be applied directly over sound rusted surfaces — usually eliminating costly surface preparations. Attach coupon to your business letterhead for your copy of the thirty-page report entitled, "The Development of a Method To Determine The Degree of Penetration of a Rust-Oleum Fish-Oil-Based Coating Into Rust On Steel Specimens," prepared by Battelle Memorial Institute technologists.

There is only one Rust-Oleum. It is distinctive as your own fingerprint.

RUST-OLEUM®

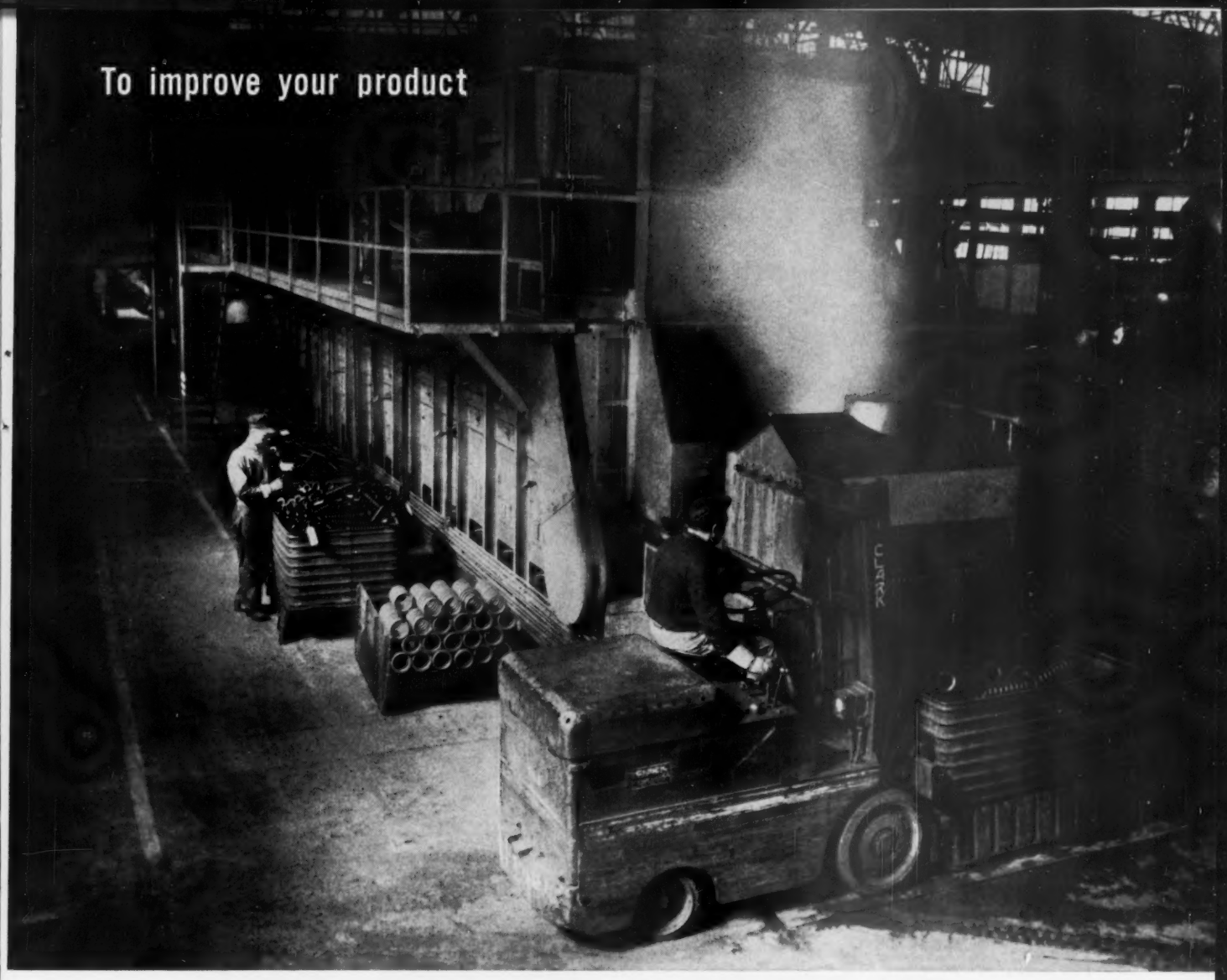
STOPS RUST!

Rust-Oleum is available in practically all colors, including aluminum and white.

ATTACH TO YOUR LETTERHEAD—MAIL TODAY!

Rust-Oleum Corporation
2532 Oakton Street
Evanston, Ill.

- ☐ Complete literature with color charts.
- ☐ Thirty-page report on Rust-Oleum penetration.
- ☐ Nearest source of supply.



Over 12 process steps are integrated into a single operation at ALCO spring manufacturing facilities. Here hot-wound railroad springs are automatically ejected from furnace after completing heat-treatment process.

ALCO *"PERFORMANCE RATED"* SPRINGS MEET MAXIMUM RAILROAD REQUIREMENTS

Automation Methods Assure Uniform Spring Quality, Precisely Meet AAR Specifications; ALCO Railroad Spring Production Experience Spans 80 Years

Millions of "Performance Rated" Springs from the nation's leading producer – ALCO – are in constant use on railroads around the world. ALCO's pioneering leadership assures reliable, high-quality railroad springs from people who know *more* about spring making.

Uniform spring quality – whether it's 10 or 10,000 springs – is guaranteed by ALCO's modern manufacturing facilities. Many production steps, coordinated into a single operation and carefully controlled electronically, provide spring quality that never varies.

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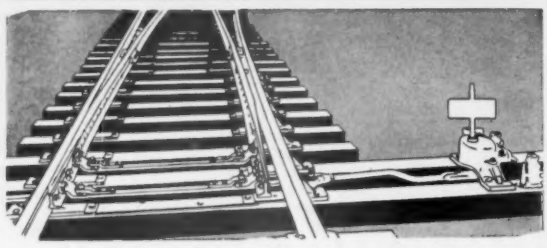

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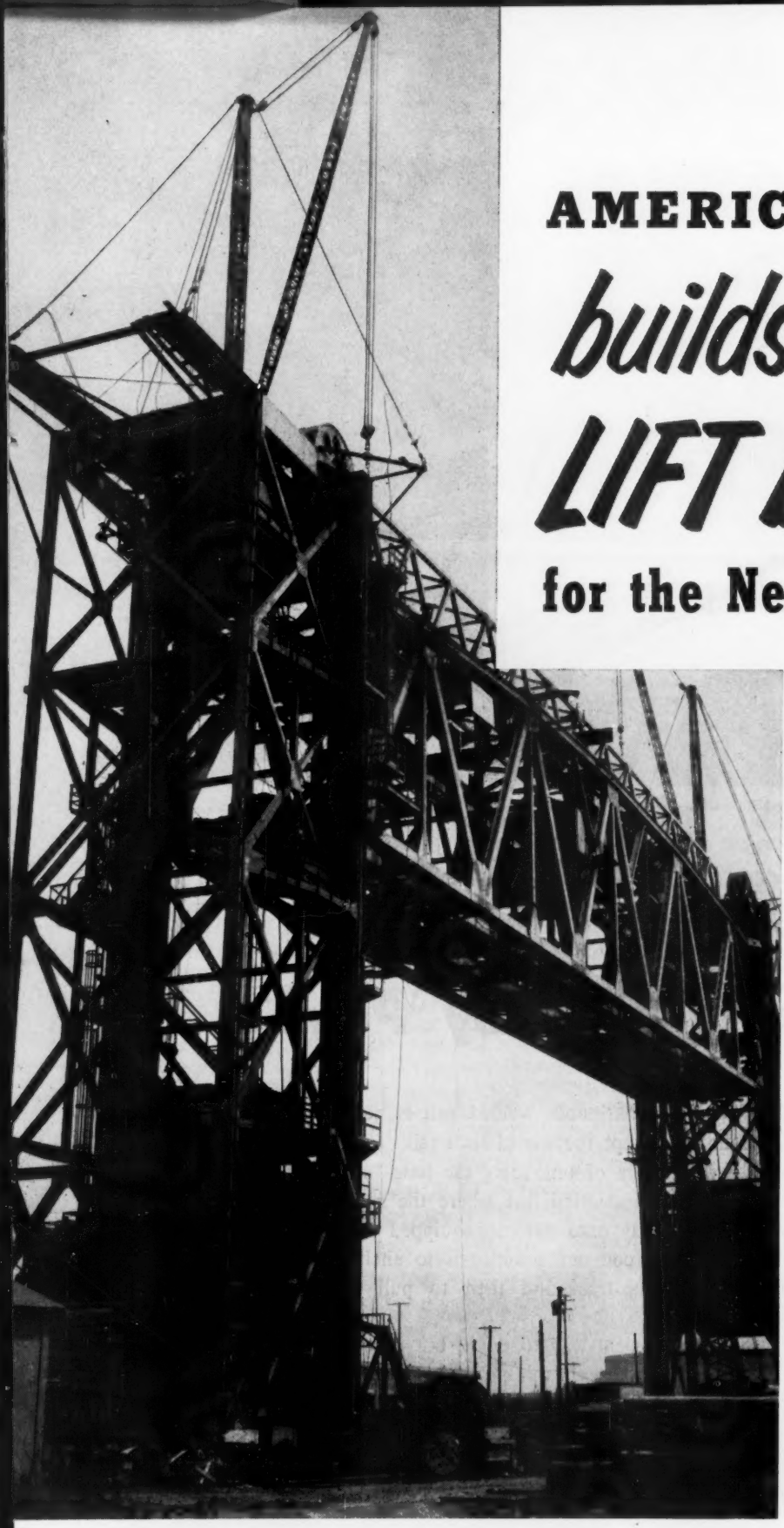

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Designed by the engineering firm of Howard, Needles, Tammen & Bergendoff, this new structure consists of a double-track thru-truss vertical-lift span 265′ long; a cable-support span (truss type) 265′ long and surmounting the vertical-lift span; and two double-track thru-truss tower spans, 30′ long x 35′ wide x 162′ high.

The trusses in the lift span are 33′ apart c. to c., and 50′ high at center (trusses have curved top chords). Each truss is composed of ten 26′-6″ panels.

In addition to the fabrication and erection of 3,065 tons of structural steelwork for this project, the American Bridge contract included installation of operating machinery, electrical equipment, engine-generator sets, machinery house equipment, counterweight framing, concrete counterweights with reinforcing steel, gratings, wire ropes and fittings, tower sheaves with shafts and bearings, and removal of the old swing bridge.

Many railroads rely upon the know-how, the facilities, and the experience of American Bridge to handle the most difficult construction problems.

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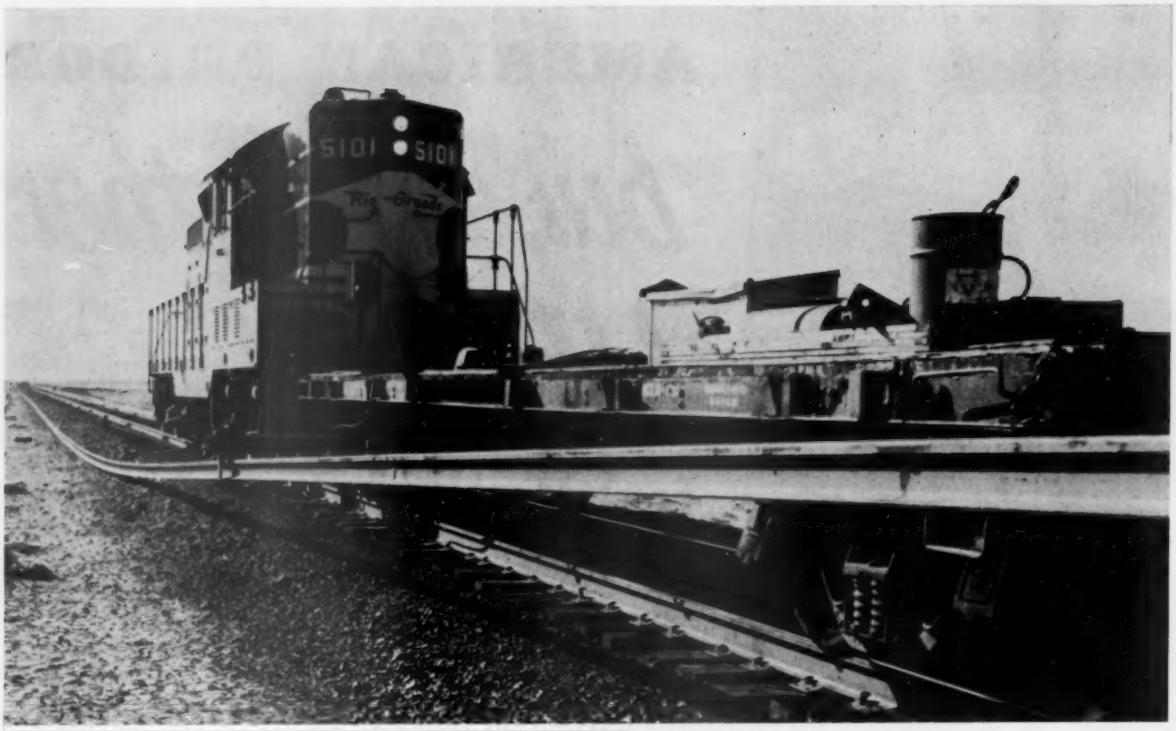


THREADERS on second idler car are carried by rail supported by brackets built into rear truck.

While most roads unload continuous welded rail by pulling the train out from under the rail "strings," the Rio Grande is—

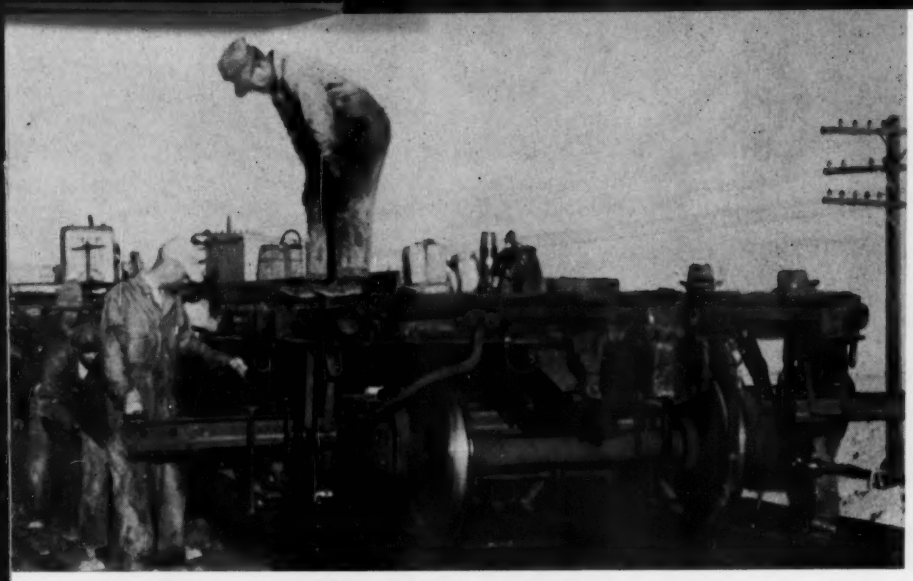
Unloading Long Rails by 'Push'

The technique of handling continuous welded rail is getting increased attention as more and more railroads adopt the use of such rail.

Take, for example, the matter of unloading the long "strings" at the site where they are to be laid. At the production line where the rails are welded the usual practice is to load them directly onto flat cars equipped with skids and rollers. To unload the rails in the field the common practice is to anchor the ends of the rails (generally two at a time) to the track and then to pull the flat cars out from under them.

This may seem to be the logical way to do it, but is it the most efficient? The Denver & Rio Grande Western doesn't think so. This road does it just the other way around; it *pushes* the cars out from under the rails. Rio Grande officers explain their preference for the "push" method this way:

"Primarily with engine and train crew close together it is not necessary to transmit signals a quarter of a mile or more, with the resultant time lag. Then, too, there's no slack action to contend with at the point of unloading. Threading the first rails by having the engine pull them through the threaders is also much simpler and faster than anchoring them and having to pull the whole train out from under them. Our experience indicates the 'push' method is much more efficient than the 'pull'."



GUIDED by threaders (left) attached to two idler cars, rails are deposited at the ballast toe line. First pair of rails (right) is threaded by locomotive (out of picture at right) pulling rails by cables attached to rail ends.

Here's How They Do It:

To begin with, the D&RGW uses lengths of rail "tailor made" for the location. Most strings run 33 rails long; some run as high as 41 rails in length. Welding, in the particular case shown in the illustrations, was done 16 hours a day, Monday through Friday. Using a single set of cars, all rails were unloaded on Saturday or Sunday. The unloading site was within 100 miles of the welding site so there was no trouble in getting the cars back in time for Monday morning's welding.

Two idler cars—converted flats—were used between the locomotive and the rail bearing cars. Each of these cars was equipped with two threaders—one on each side. Brackets were welded on the top of one end of the idler car farthest from the locomotive. Through these brackets was passed a piece of 110-lb rail. The threaders were slipped over the ends of this rail. The second idler car—the one nearest the locomotive—had similar brackets built into the truck closest to the locomotive. A piece of 110-lb rail was likewise passed through these brackets and threaders installed—one on either side.

To get the operation "rolling," the locomotive was uncoupled from the train. Cables were passed up through the threaders on either side and connected by means of a clevis to the ends of the first two rails to be unloaded. The other ends of the cables were secured to the knuckle pin of the locomotive. The locomotive then pulled the rails out through the threaders. When the rail ends were on the ground, they were connected by slotted fish plates to the previous welded strings on the ground. The first two rails unloaded at the laying site were anchored to a piece of rail which had been slipped between the ties at right angles to the track.

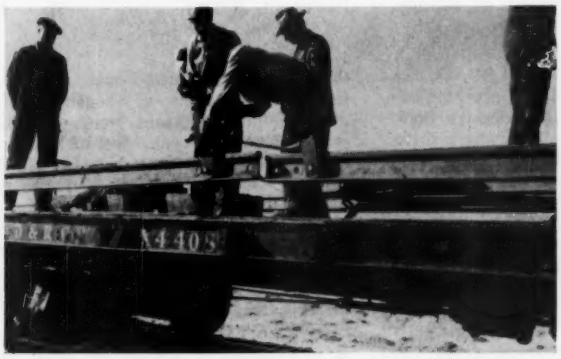
With the rail ends anchored, the locomotive was recoupled to the train. At this point rail anchors were installed on the ends of the 110-lb rail threader supports to keep the threaders from "riding off." Rail which overturned at the toe line when unloaded was easily righted when picked up for laying.

When the first two strings were nearly unloaded, preparations were made for tying on the second pair of long rails. With the train still in motion, yokes with short lengths of cables attached, were secured to the ends of the next two rails. These yokes were pinned through a bolt hole in each rail. Each cable had an eye in its free end.

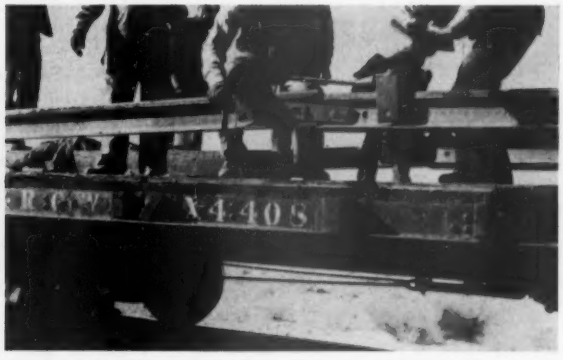
A second pair of yokes, meanwhile, was similarly secured to the ends of the rails being unloaded. These yokes were equipped with pins on their upper surfaces. When the trailing ends of the first rails passed the loading ends of the second pair, the cables were simply slipped over the pins so that, in effect, the first rails were "pulling" the second pair. This automatically alined the rail ends, with a slight gap between them.

At this juncture, the train was stopped. Yokes were removed and fish plates applied to the rail ends. These fish plates were secured through the bolt holes with short pins held in place by cotter keys. This design was necessary for them to pass freely through the threaders. With plates applied, the train moved on.

Normally, there were about 15 or 16 strings to unload each week-end. After the rails had been threaded, about 1½ hours were required to complete the job. During this time the train occupied the track without interruption. And the total manpower, aside from the train crew and supervision, was only four, sometimes five, section men.



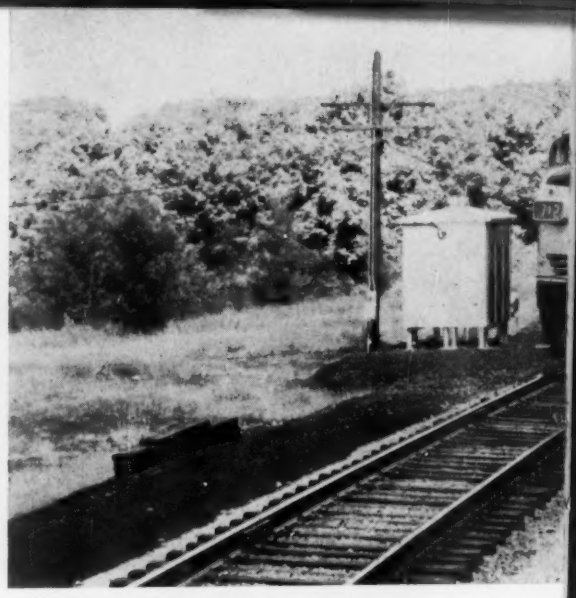
"TIE UP" is made by simple pin-and-cable arrangement while the train is still in motion.



FISH PLATES are applied to more permanently link rails with train stopped.

On 125 route miles of this heavy-duty freight line track changes, along with the modern signal installation, permitted retirement of 63 miles of second main track and 13 miles of sidings, while retaining adequate track capacity.

Advance warning of changing conditions ahead permits an increase of 5 mph in maximum permissible speeds of heavy freights, in addition to which time savings result from elimination of many delays to trains inevitable before CTC was in service.



One-Tracking the Bessemer

The Bessemer & Lake Erie is one of the principal rail links between the Great Lakes and the heavily industrialized Pittsburgh metropolitan area. The hub of operations at the north end of the railroad is a large yard at Albion, Pa. On the 125 route miles between Albion and North Bessemer, the B&LE recently installed contralized traffic control on 184.7 miles of track. Of this total, 19.6 miles is signaled in one direction only, 157 miles is signaled in each direction, and there are 8.2 miles of non-signaled passing sidings.

This CTC project is an extension of the installation previously put in service between Filer and Meadville Junction, 42 road miles. On the remainder of the railroad, there was no automatic signaling; train movements were authorized by manual block. The 1956 CTC installation permitted retirement of a total of 63 miles of main track and 13 miles of sidings. However, some portions of the previous second main track were converted to sidings with hand-throw switches, used by road switcher crews to serve house tracks at Grove City, 2 miles; Fredonia, 1.5 miles; Conneautville, 1.5 miles; and Springboro, 1.5 miles, totaling 6.5 miles.

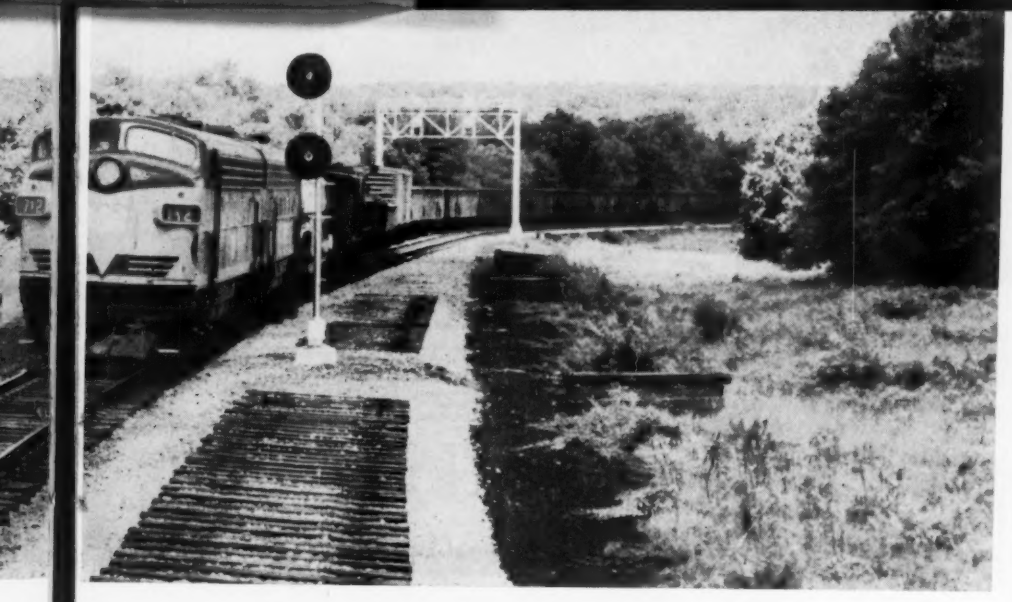
Pattern of Train Movements

This railroad traverses rather rough country with numerous curves, up hill and down, with a maximum main-line grade of 0.6 per cent southbound, in the direction of the heavy ore tonnage movement. A locomotive consisting of four diesel units, rated at a total of 6,000 hp, handles about 13,000 gross tons in this direction.

Train movements fall into three general groups: transfer moves, through freights, and road switchers. North of Albion, train operation is

◄ **ALL-FREIGHT RAILROAD,** the B&LE's northern terminals are at Conneaut, Ohio, which has extensive dock facilities; and at Erie, Pa., where there are several interchange connections. From these points the Bessemer extends south to North Bessemer, Pa. (near Pittsburgh), where it connects with the Union Railroad, an important local switching road serving steel mills and industries, and with other lines in the Pittsburgh area.

The preponderance of the Bessemer's traffic is iron ore tonnage from the docks at Conneaut to the Pittsburgh or Youngstown areas. Traffic to and from the latter point is interchanged with the Erie or Pennsylvania at Shenango, 55.7 miles south of Conneaut. Northward, the principal traffic is coal. Most of it comes from mines in the area between North Bessemer and Butler, and is moved to interchange points or to the docks for lake shipment. Movement of limestone for the Pittsburgh steel mills is also important. This traffic develops in three ways: it originates at a quarry at Annandale, on a B&LE branch; it is moved from the dock at Conneaut; and it is received in interchange from the Western Allegheny, which connects with the Bessemer at Queen Junction.



Possible with CTC

in the nature of transfer moves, to and from Erie, 23 miles, and to and from Conneaut, 14 miles. Southward road trains are dispatched from Albion; northward they are broken up at that point. When a loaded ore boat is due at Conneaut, cars must be on hand to unload the ore as a continuous operation. Loaded southward ore trains move out of Albion about three hours apart, and during open navigation on the Great Lakes about nine daily freight trains operate in each direction. The number of loaded ore cars handled in 24 hours may range range up to 800 or more.

Northward, throughout the year, one fast symbol train is operated, with scheduled connections at Shenango with the Erie, and at Wallace Junction, Pa., with the Nickel Plate. The road switcher crews out of North Bessemer set out empty cars and pick up loads at the coal mines between North Bessemer and Butler.

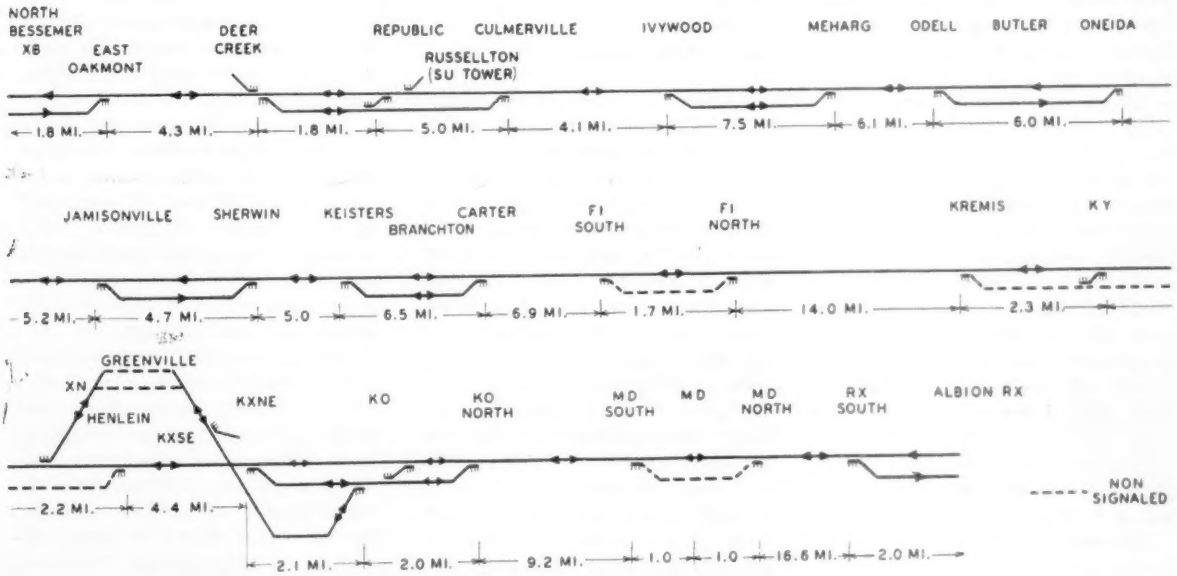
Train Performance Improved

Despite the 63-mile reduction in its main track, the installation of CTC has enabled the Bessemer to improve train performance. Now, as before, southward loaded trains are given preference, and these are moving at a higher average speed than previously.

Under the former manual block system, trains approached block stations at reduced speed, prepared to stop, until the home signal aspect was visible to the engineman. Under CTC, train movements are authorized not only by home signals, but also from corresponding approach signals, so in every case the enginemen have advance information, and, therefore, no unnecessary speed reduction is required when approaching any signal.

The new system also includes complete automatic block protection against trains ahead, broken rails, cars on foulings and spur track switches. Thus, the enginemen have confidence that they can, with safety, hold their trains consistently nearer to the maximum authorized speed. That the new signaling permits a higher safe speed was the primary factor in a decision to raise the maximum speed from 40 to 45 mph.

With about three-hour southward through train spacing, there is plenty of opportunity to use the power sidings and double track sections to expedite northward train movement, which in most cases equals or betters previous performance. Road-switcher crews also reflect improved performance. Under the previous train order and manual block operation, a road-switcher would be given authority to use a section of main track in such a manner as to get into the clear, well before the anticipated arrival time of



LOCATION AND SPACING of sidings between North Bessemer and Albion.

a through train. If the through train was unexpectedly delayed, the road-switcher wasted time because the dispatcher lacked a means of communicating with its crew.

Now, all hand-throw main track switches have electric lock protection (except in 20-mph territory), and indications on the dispatcher's panel show the location and progress of every train on main track. With this protection and information, the dispatcher can work closely with each road-switcher crew to save time. This has enabled savings of 20 min or more in single moves.

Protection at Switches

Another important element of this project is the protection afforded at hand-throw main-track switches and crossovers. In this CTC territory there is a total of 68 main-track hand-throw switches leading to spurs serving industries, mines, or freight-houses. At each of these main-track switches, the previous conventional stand was replaced with a Style T-21 hand-throw switch stand. A lift-type derail at the clearance point is pipe-connected to a lock-bar operating lever stand, on the ends of the ties about 9 ft from the points of the switch. Pipe connections from this stand extend to the lock plunger in the T-21 stand at the switch. The lock-bar operating stand, which operates the derail and the T-21 lock rod, includes a Style SL-25 electric lock.

This arrangement serves two purposes: (1) to place operation of derail and switch on separate stands, thereby reducing the required physical effort; and (2) to permit the derail to be removed independent of the switch operation, thereby permitting "flying switches" to be made.

First applied extensively on this project, the audio frequency overlay (AFO) track circuit is used for the automatic release of the electric locks on hand-throw switches. Instead of employing separate short releasing track circuits, the AFO circuit is superimposed on the existing track circuits with no mutual interference. Using audio frequency overlay equipment has eliminated the need for insulated joints at these sidings and at the same time has reduced the number of track connections by one half.

The power switch machines on this project are of the Style A-21 electropneumatic type with dual-control levers for hand operation during special switching movements. Several factors motivated the preference for electropneumatic over electric switch machines. Rail weights on the Bessemer vary from 130 lb upward to 155 lb, and the switch points on the No. 20 turnouts are 39 ft long. The electropneumatic machines move these heavy points with sufficient snap to crush ice, coal or twigs which may be fouling the points.

NAME	INDICATIONS	ASPECTS	NAME	INDICATIONS	ASPECTS
CLEAR	PROCEED	G / R ; G / DARK NUMBER	MEDIUM APPROACH	PROCEED AT MEDIUM SPEED PREPARING TO STOP AT NEXT SIGNAL	R / FY
APPROACH LIMITED	PROCEED APPROACHING NEXT SIGNAL AT LIMITED SPEED	G / FY ; G / FY NUMBER	SLOW CLEAR	PROCEED, SLOW SPEED WITHIN INTERLOCKING LIMITS	G
LIMITED CLEAR	PROCEED, LIMITED SPEED WITHIN INTERLOCKING LIMITS	G / Y	SLOW APPROACH	PROCEED PREPARING TO STOP AT NEXT SIGNAL. SLOW SPEED WITHIN INTERLOCKING LIMITS	FY
APPROACH MEDIUM	PROCEED APPROACHING NEXT SIGNAL AT MEDIUM SPEED	Y / G ; Y / G NUMBER	RESTRICTING	PROCEED AT RESTRICTED SPEED	R / Y ; R / Y NUMBER / Y
MEDIUM CLEAR	PROCEED, MEDIUM SPEED WITHIN INTERLOCKING LIMITS	R / FG ; FG	STOP	STOP	R / R ; R / DARK NUMBER / R
MEDIUM APPROACH MEDIUM	PROCEED, MEDIUM SPEED WITHIN INTERLOCKING LIMITS APPROACHING NEXT SIGNAL AT MEDIUM SPEED	R / G	FY=FLASHING YELLOW FG=FLASHING GREEN		
APPROACH	PROCEED PREPARING TO STOP AT NEXT SIGNAL. TRAIN EXCEEDING MEDIUM SPEED MUST AT ONCE REDUCE TO THAT SPEED	Y / R ; Y / DARK NUMBER			

FLASHING ASPECTS SAVE ONE ARM

The aspects and indications as developed by the B&LE for use on this CTC are shown above. By maximum use of flashing aspects, it was possible to utilize "two-arm" signaling to provide all of the aspects required. The system provides a limited speed aspect for diverging moves over No. 20 turnouts of 40 mph; medium speed aspect for diverging moves over No. 16 turnouts at 30 mph; and 15 mph for diverging moves over No. 11 turnouts.

Electric Snow Melters

Each of the power switch layouts in this project is equipped with a set of electric snow melters which are controlled by the dispatcher through the CTC system. Each heater coil is enclosed in a metal pad, 3 in. wide by 15 in. long by ¼ in. thick, which is held flat against the gage side of the web of the rail by a bolt through the web. Each switch has 24 such heater units, each rated at 500 watts. Starting from the switch point, the first 8 units are energized at 220 volts. The remaining 16 units are connected in series-multiple to operate at 55 volts on each unit. Based on weather reports and phone reports from railroad employees along the line, the dispatcher determines when snow storms are expected or have started. He then sends out CTC controls to energize the electric switch heaters. In general the heaters are turned on during any low-temperature period, especially over weekends.

A special starting signal has been installed to meet operating requirements peculiar to Curtisville, only. At Curtisville yard, northward trains customarily set out or pick up cars on trackage which is beyond the range of vision of the next northward CTC controlled signal. A further movement northward, after such work, may encounter a Stop indication when the signal becomes visible. A stop then would, however, block important street crossings. To avoid this, a special starting signal is installed to the right of the northward track just south of Curtisville road crossing. This starting signal displays the letter "S" whenever the northward home signal at Culmerville is displaying a proceed aspect.

This CTC installation was planned and installed under the jurisdiction of J. E. Yewell, chief engineer, and under the immediate supervision of G. R. Pflasterer, signal engineer. The major items of material, as well as the detail circuit plans, were furnished by the Union Switch & Signal Division of Westinghouse Air Brake Company.

Determined to stay in passenger business —and to make it PAY...

The NYC Taps Its Travel Potential

Passenger operations on the New York Central have been focused recently under a triple spotlight revealing new emphasis on equipment, rates and scheduling. Action in each area is part of a fresh but still developing approach to the business of carrying people.

CENTRAL'S ADOPTION of the lightweight Pullman-Standard "Xplorer" and its trial of a General Motors "Aerotrain" were the first steps toward the road's goal of equipping itself in line with the wants of its customers and its own cost-minded ideas.

CENTRAL'S PARTICIPATION in the filing with other eastern carriers for a 45% boost in first-class fares presaged the road's planned assault on regulatory bodies to win the right to sell tickets at prices which will permit the road to at least meet its costs.

CENTRAL'S TIMETABLES, sweepingly revised October 1, were a huge stride toward scheduling trains primarily on the basis of when travelers **will** and when they **want to** ride. This is the phase of the road's plans most nearly fulfilled and as such approaches what Central's vice-president, passenger sales and service, E. C. Nickerson, calls the road's "new passenger service concept."

"We're not pessimistic about the passenger business," a New York Central officer avowed recently. "We're realistic."

It was his retort to the round of angry *How come?"s* that followed the Central's moves to elevate first class fares by almost half, or sell or lease its passenger terminals, and to reduce sharply big-loss commuter and branch-line services.

Realism on the New York Central may be defined as an attitude which (1) sees no point in trying to continue an operation that drains the lifeblood of its freight business but (2) sees a chance to improve passenger trains that have a profit potential and trim those which have not.

Upping periscope for a look around after a long period of intensive market research, the road's passenger department personnel were dismayed. What they had and what their objective studies told them they ought to have were radically different.

Not infrequently trains were running at the wrong times for optimum development of coach travel. The exceptional train running on desirable schedules sometimes was a "horror" equipment-wise. Terminal and station costs were excessive; sleeper and dining cars often barely paid the wages of their crews, if at all; passengers were staying off the trains en masse, lured to the air lines or stoplight-free superhighways.

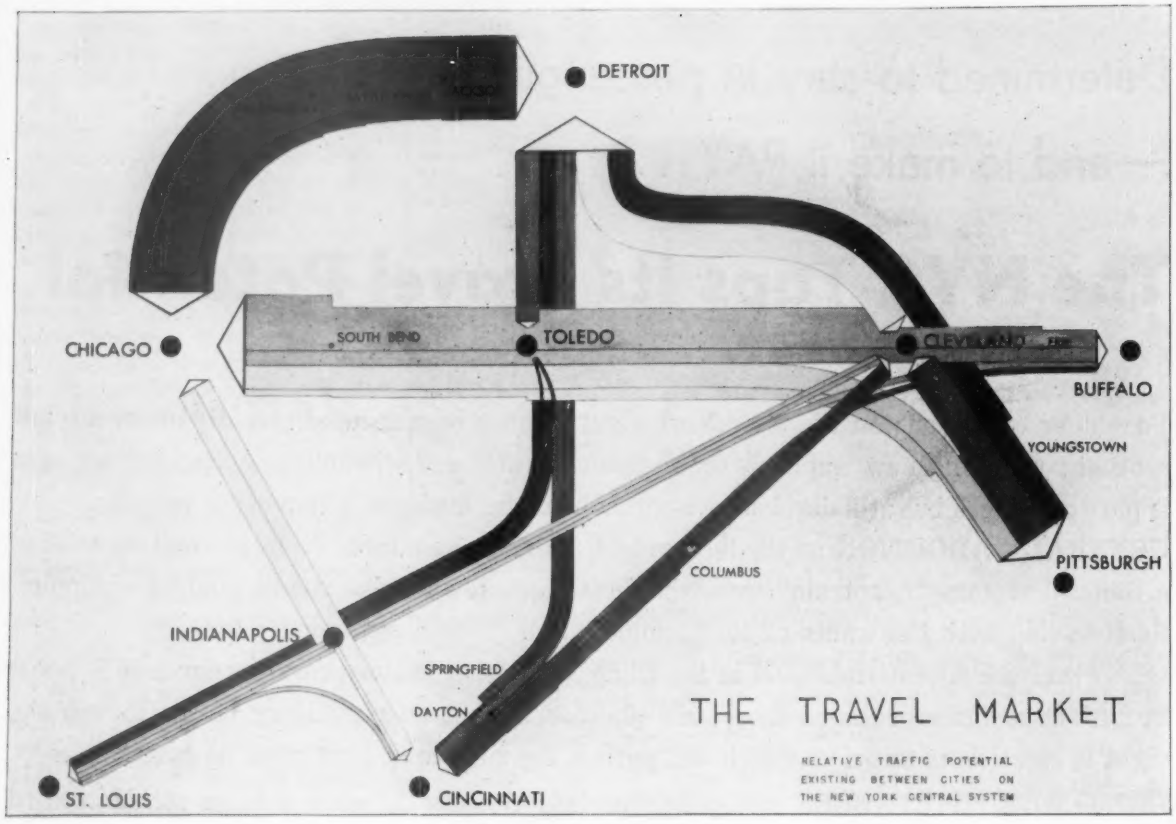
On top of that, trains were stopping at places that couldn't possibly support the service. It was found that many trains were run to suit the Post Office Department or were squeezed onto timetables largely on schedules timed for operating convenience.

It was time for a change—which got started in earnest with the introduction of the fall schedules October 28. But this was neither the beginning of the transition nor its ultimate aim.

'Laboratory' Ventures

A key part in the road's development of a revamped passenger operation was its use of the "Xplorer" and "Aerotrain" in the midwest. While its trial of the General Motors train is over, the train served, and the Pullman-Standard prototype continues to serve, as a laboratory for the Central's passenger department. As much as anything else, it is hoped that experience with the two trains will give some firm ideas as to what kind of equipment will give the best service at acceptable costs and, also, what kind of train appeals most to the traveler.

Among observations already made



EXPLOITABLE business between major cities west of Buffalo is indicated here.

is that the public wants attractive coach decor but seems willing to forego luxurious dining car service if adequate seat-side meals can be provided efficiently. Operationally, it has became apparent that new equipment must be capable of fast acceleration and deceleration and must be designed so passengers *and baggage* can be loaded and unloaded quickly —all these factors tending to save time at station stops.

Central has little hope for buying more new passenger equipment soon, however, because its financial situation will not permit it, primarily, but also because the other phases of its "new concept" evolution have immediate priority.

Scheduling and pricing are the areas for emphasis now: the road is setting out to run its trains on schedules that cater to the public's wishes but it hopes to get the revenues needed to make its other efforts at tapping the travel potential pay off.

As a starter toward financially sound operations, Central joined the Pennsylvania and several other eastern roads in a bid to raise its first-class fares 45% and its coach fares 5%. Still pending before the Interstate Commerce Commission, the application has received a partial blessing in the commission's year-end recognition—in the form of an "emergency" 5% fare increase—of the road's need for more income.

Behind the Central's application are plans which it is convinced will enable it to compete effectively with the airplane on runs of 10-12 rail hours and to persuade the user of the highways he'd be better off leaving his auto at home on intermediate-distance trips. With the revenues it is aiming at, the Central feels it can provide appealing passenger service. The road's officers insist it has no intention of "getting out" of the passenger business.

The Passenger Market

Opportunities are sized up as falling into three types of passenger service (other than commutation), each offering different potentials and each demanding distinctive handling. Based on studies of the nation's travel habits, the classifications are: long-haul (usually overnight) Pullman travel; long-haul "cruise" coach service; and relatively short-haul coach travel.

The golden opportunity, it is felt, lies in intercity movements of one to ten hours of unbroken rail travel. Here, it is thought, a railroad can compete best with other means of travel if it provides efficient, fast and comfortable service. Coach operation, it is argued, makes the most efficient use of railroad manpower and equipment, offers the greatest mass-movement potential and, as a result, puts profits within reach.

A market which the Central has exploited hardly at all—as compared to the potential—is in long-distance intercity coach travel. Competition here is from the air lines primarily but, although it can't be ignored from a service standpoint, speed cannot be a railroad selling point. Recognizing what the western roads have seen—that this type of travel is mainly for pleasure rather than for business nowadays—the Central plans to follow the lead of the western roads that have done so well selling the "pleasant sensations" of comfortable cruise travel over interesting terrain. A newly - constituted "Knickerbocker"

will be the road's feature New York-St. Louis train and will emphasize "cruise"-type travel.

Business travel presents the third area for potential traffic growth on the Central, largely on overnight runs between major cities. Central spokesmen feel they are already getting a good share of this travel but believe they can exploit it further through concentration on trains that depart and arrive between 5 p.m. and 9 a.m.

The road's new fall schedule (which involved system-wide discontinuance of thousands of train miles on an annual basis) mark a sharp break with many old procedures and reflect the concentration of trains between points capable of producing maximum passenger-miles. The new schedules also evidence broadened responsibility for the passenger department which now has more authority for passenger trains and service.

This also implies a co-existent mandate to the department to make money with its trains and to answer "why" if the new procedures don't produce desired results.

Behind the schedules too is the story of how the road overcame the legal obstacles a railroad meets in making service changes. Limited by regulation which is basically restrictive rather than permissive, the Central might have consumed upwards a number of years in public hearings and similar undertakings had it followed normal procedure in getting state public service commissions to approve the service revisions it sought to make.

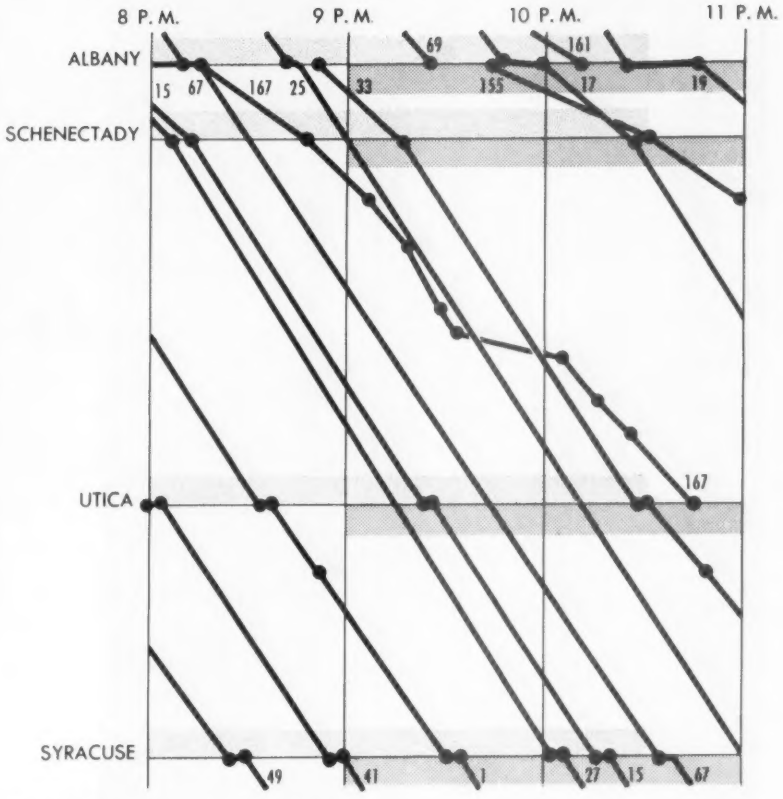
Proposals Unchallenged

What the road did was to publish its proposed timetables August 1 simultaneously with advertising and merchandising campaigns in the localities affected. As objections came in, the road altered some of its original proposals, winding up on October 28 with fully 75% of its proposals unchanged and virtually unchallenged.

When the various regulatory bodies did not reject the new schedules they tacitly approved them.

Thus, the bulk of what the road sought to do has already been accomplished—less such revisions as may be seen necessary under experience with new schedules—with little delay.

And the Central defends its procedures with the statement that it had to take such an "aggressive approach" if it hoped to "stay alive."



PREFERRED HOURS to come (light shading) and go (dark shading) "travel-tailor" Central's schedules as shown in above portion of string timetable.

MATCHING TRAINS TO THE SERVICE

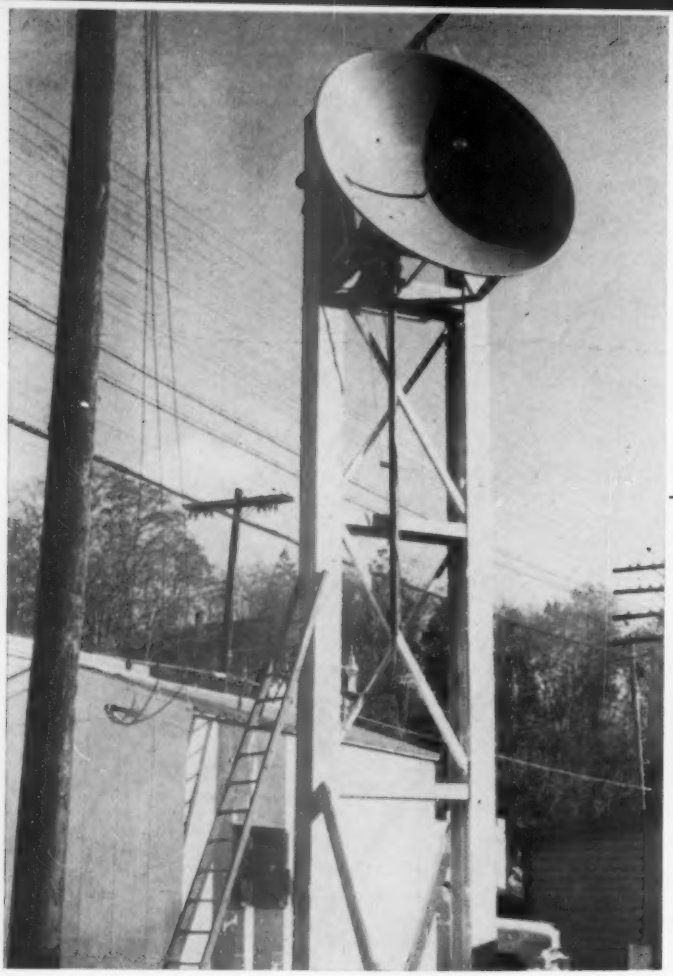
A key to the New York Central's new schedules is recognition of the varying degrees of travel potential between points on its lines. Cities of varying size and makeup offer more or less opportunity for exploitation.

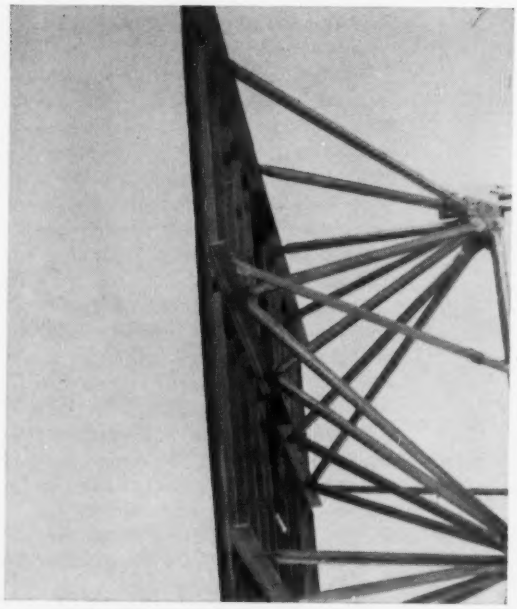
Of these, it is figured that only 20 or so metropolitan centers served by the NYC can profitably sustain strict point-to-point scheduling. A greater number of middle-size cities can add to passenger revenues when served as secondary stops on through runs but they cannot, it is felt, independently support train service today.

The still greater number of small cities (say 25,000 or less population) cannot be served individually at all in a modern rail operation. Serious thought, though, is being given to serving "key cities" among several such adjacent communities through development of "park-and-ride-the-train" facilities.

How this background is put to work is illustrated in the revamping of the Central's "Southwestern Limited" schedule. This train used to be scheduled through between St. Louis and New York on a 22½-hr schedule. It served as a day train from St. Louis as far as Cleveland where it was remade as an over-night train to New York actually only two or three cars from St. Louis in a 16-car makeup.

Now this service is performed out of St. Louis by the "Southwestern," a fast day coach train offering improved service between that city and Cleveland, where it terminates. A completely separate train, the "Cleveland Limited" takes over the Cleveland-New York leg, again bettering the former service.





FROM THIS "SAUCER" at Dunsmuir (left), the beam goes 1.7 miles up to the mountain top passive reflector

How Microwave Replaces Pole

In territory subject to 10-ft snow, ice on line wires and winds up to 100 mph, line circuits are destroyed nearly every winter—Communications and CTC controls by "beamed radio" overcome this hazard

A microwave installation, recently completed by the Southern Pacific between Dunsmuir, Cal., and Black Butte, is expected not only to give 100 per cent reliability during weather that would destroy pole lines, but also to require less maintenance expense than the present wire lines.

This project is in the vicinity of Mount Shasta, in northern California, where heavy snowfall, up to 15 ft deep, and winds of 100 mph damage the line wires and poles nearly every winter. Therefore this territory was selected by the Southern Pacific for its first microwave installation, which is to be a laboratory to determine whether more extensive installations are to be made to replace pole lines on other lines of the railroad system.

In brief, microwave is a system in which high-frequency radio energy is transmitted in a fixed direction on a line-of-sight basis, rather than being broadcast in all directions, as conventional radio. Of further importance, in microwave, numerous different channels can be transmitted (and received) simultaneously, so that many telephone conversations, telegraph messages and signaling control circuits can be handled.

Why Microwave Was Adopted

Between Dunsmuir and Black Butte, the railroad is located in deep ravines and around mountains, the distance being 23 miles. The "straight line" distance between these offices is about 15 miles, but such a line would be through high mountains. Therefore, the microwave, which follows line-of-sight in open air, had to be directed up out of deep canyons, and from point-to-point to get around mountains.

Saucers for Microwave

In this microwave system the antennas are large metal "saucers," technically referred to as "dishes," which are used at transmitter-receiver stations as a means of improving the direction and concentration of the outgoing "beam," and to assist in con-

(above), and from this reflector, beam goes 7.9 miles down to the back-to-back repeater at Mt. Shasta station (right).

Line in Snow-Plagued Mountains

centrating the incoming beam. The high directivity and narrow beam width requires that the saucer antennas and reflectors be mounted on frameworks or towers that have stability and resistance to deflection in both azimuth and elevation.

At the back-to-back drop-out repeater at Mount Shasta station there is a 100-ft structural steel tower. At the top of this tower are two 10-ft by 15-ft reflectors, which are essentially flat metallic sheets.

Each of these reflectors is set at the proper angle to reflect incoming signals down to its corresponding 40-in. saucer on top of the equipment house. Likewise, outgoing signals from this station are transmitted from each of the 40-in. saucers on the roof, up to its corresponding 10 ft by 15 ft reflector for transmission to the next location.

The two passive reflectors, on the high mountain ridges, are identical to the tower-top reflectors at the Mount Shasta station. At each of these mountain ridges locations the reflector is mounted on a 15 ft structural steel tower, which is high enough to bring the bottom of the reflector 6 ft above ground level, so that snow is not likely to interfere with the beam.

Self-Supporting Tower

At the terminal at Dunsmuir the transmitter-receiver antenna is a saucer 10 ft in diameter. The concave dimension, which is not adjustable, is determined by the requirement for optimum reflection of the incident energy rather than any mechanical consideration.

The building for the microwave transmitter-receiver equipment at Dunsmuir is between the tracks and a street, in an area where no space is available for guys or anchors. To clear trains and other obstructions, so that there would be a line of sight for the beam, a self-supporting tower 30 ft high, with no guys, was required, on which to mount the 10-ft saucer. The engineering department of the SP designed such a tower, and the car department forces made it from scrap materials taken from freight cars being dismantled. A 10-ft saucer antenna and H frame of standard wood pole construction was installed at Black Butte.

The basic microwave radio frequency equipment is of the Motorola "Micro Package" type, generally designated as Model FSTM-30. The microwave channels are frequency modulated with normal deviation of plus or minus 3 mc. The multiplexing equipment, at present, includes a base band order wire circuit manufactured by Motorola and Lenkurt carrier equipment. The microwave equipment is in duplicate at Dunsmuir, Mount Shasta and Black Butte.

Capacity for Many Circuits

The present equipment has a capacity for 120 channels. However, it is planned to utilize 32 voice chan-

nels with 5 channels dropped out at Mount Shasta. Sixteen voice channels are to be available for through service between Dunsmuir and Black Butte. Any voice channel can be used for 18 printing telegraph circuits.

During the first in-service period, the microwave system is to handle eight "line" circuits simultaneously. Three of these are telephone train dispatching circuits, with dispatchers at Dunsmuir: (a) Black Butte to Ashland; (b) Black Butte to Alturas via Klamath Falls; and (c) Dunsmuir to Black Butte.

Channel for Teletype

The fourth and fifth circuits on the microwave are for telephone conversational use. One of these circuits extends from Dunsmuir to Ashland and the other from Dunsmuir to Black Butte. One microwave channel is reserved for centralized traffic control code line circuits, and for experimental CTC and other automatic functions. The seventh channel will be used as one segment of a Teletype carrier system which involves the operation of 13 Teletype channels on one carrier voice channel. The remaining voice channel will serve as a remote control circuit for train to wayside VHF radio stations.

Fault detection circuits initiate switchover to standby equipment whenever an equipment malfunction is detected. A newly developed alarm system is included which identifies the type of failure and transmits an indication to the wire chief at Dunsmuir.

After the microwave system has been in service long enough to prove all the operations, the communications pole line between Dunsmuir and Black Butte, which now has 27 line wires, is to be removed.

Ice or heavy snow on the "saucers" would interfere, to a certain extent, with operation of the microwave system. Therefore, the saucers are equipped with electric heater de-icer units which are automatically turned on by thermostatic control when the temperature drops to 40 deg. F.

Uniform Power with Stand-By

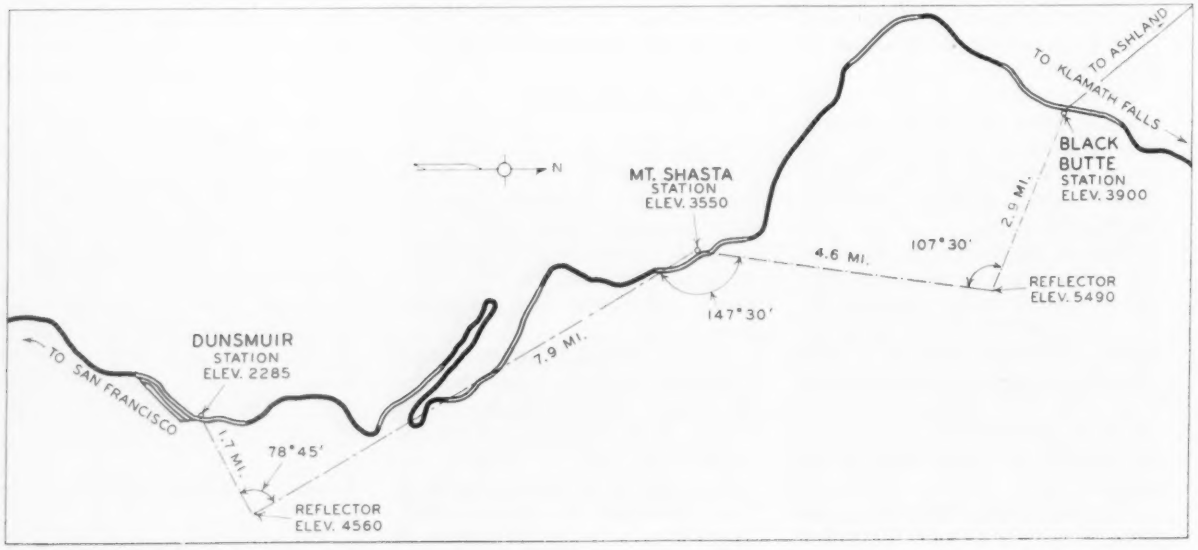
To insure uniform frequency and voltage of the power supply for the microwave, the SP installed micropower plants. A micropower unit consists essentially of an electric motor, an alternator, a flywheel, magnetic clutch and an internal combustion engine which uses propane as fuel. Normally the motor operates on 220-volt, 3 phase, 60 cycle a-c, supplied from commercial sources.

If the commercial a-c fails, a contactor operates to disconnect the electric motor from the commercial a-c source, and to energize the magnetic clutch, connecting the alternator to the engine. The inertia of the flywheel, turning at 1,800 rpm, will start the engine and afford close voltage regulation of the alternator. The engine is now the prime mover without interruption of the alternator output of a-c to the communications equipment. Each machine is rated at 5kva output at 117 volts, 60 cycles. In addition to the communications load, these machines will also take over the de-icer loads if commercial a-c power fails.

Custom Designed Equipment

This microwave project was planned and installed by Southern Pacific forces under the direction of A. E. DeMattei, superintendent of communications. When planning this project, the SP prepared requisites and specifications which were submitted to several manufacturers. The contract was awarded to Motorola, Inc., which furnished the custom-designed, custom-built system. The carrier equipment was made by the Lenkurt Electric Company of San Carlos, Cal. The special 10-ft saucer antennas were made by the Gabriel Electronics Division of the Gabriel Company, Needham, Mass.

The 100-ft tower and all reflectors at Mount Shasta station and on mountain tops were made by the G. E. Mathis Company, Chicago, and the power supply machine by the U.S. Motors Corporation, Oshkosh, Wis.



PLAN SHOWING how the line-of-sight microwave beam path with respect to the route of the railroad.

DRILLING OPERATION uses hydraulically operated doweling machine. Holes are drilled and steel dowels inserted automatically as conveyor moves tie through machine.

SEE FOR YOURSELF

How SP Stops Crosstie Splits

The Southern Pacific is adding years to crosstie life by grading out ties that are likely to split, then reinforcing them with steel dowels before they are installed.

Crossties cut from the wood at or near the center of the tree (called "heartwood") have a natural tendency toward splitting—more so than ties cut from the outside of the tree. For this reason, many roads use "anti-splitting" devices: Irons, pins, dowels, straps—in fact, anything that will effectively hold the wood together under the effects of traffic and climate.

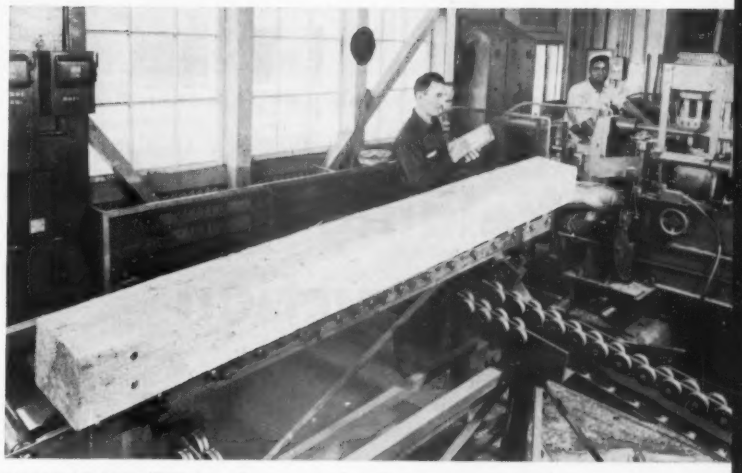
The SP, at its wood preservation plant—a 17-acre spread at West Oakland, Cal.—treats its ties with creosote and oil to resist the ravages of rot, insects, etc. It also drives special, threaded dowels—7¾ in. long by 7/16 in. in diameter—into those of its 7-in. by 9-in. by 8-ft crossties which exhibit splitting tendencies.

At the processing plant, ties are loaded into tram cars at the air-seasoning yard and fed into boring and incising machines. The boring provides holes for spikes; the incising gives deeper penetration for the preservative.

The ties then move by conveyor past a tie inspector who weeds out the heartwood ties. These he clamps into a hydraulically operated doweling machine. Two ⅜-in. drills bore into the side of the tie at each end. As the drills are withdrawn (automatically), push pins on the opposite side insert the steel dowels from a magazine loader.

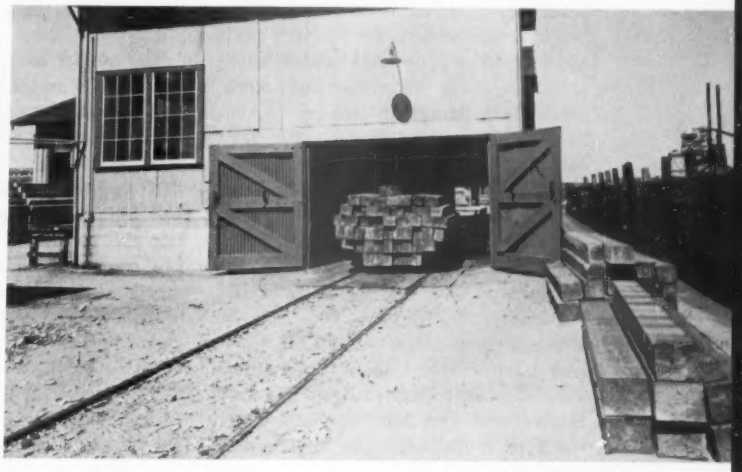
The ties are then reloaded onto the tram cars and run into the treating cylinder—some 1,000 ties at a time. About 60 percent of SP's ties are reinforced with steel dowels made by the Bethlehem Pacific Coast Steel Company at South San Francisco.

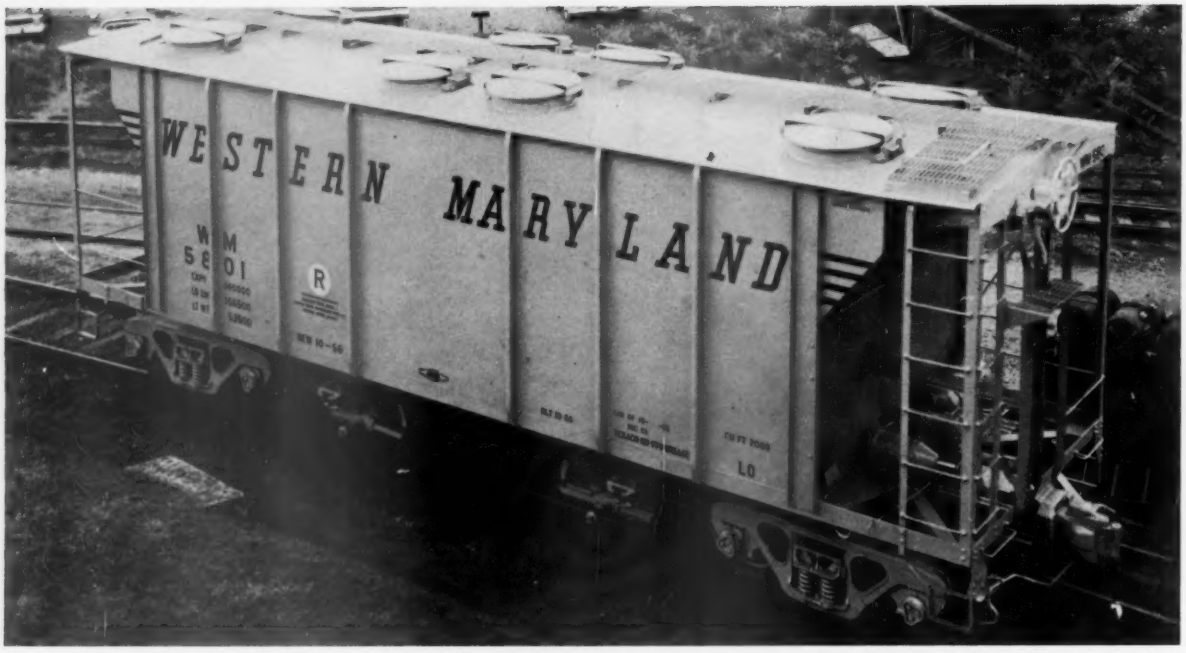
The end result: Crossties that will last over 25 years in track—at a cost of a little more than $5 per installed tie.



REINFORCED TIE has four steel dowels—2 at each end—and is ready for preservative treatment. About 60% of SP's crossties get the doweling treatment. All are treated with preservative.

DOWELED, bored and incised, ties leave tie mill on tram cars, enroute to preservative plant. There, creosote and oil are pressured into wood to effective depth of ¾-in.





The builder delivered 150 of these cars last year; 100 more are on order.

Welding Speeds Covered Hopper Construction

A late addition to the Western Maryland roller-bearing freight car fleet is a series of 150 covered hoppers built by the Greenville Steel Car Company. These cars are based on Greenville's standard covered hopper with certain changes required by the railroad.

The cars are almost completely welded. They are 70-ton, two-compartment, 2,003-cu ft models with a length over strikers of 35 ft 3 in. Most of the body and underframe are built with copper-bearing steel plates and structural shapes. AAR 51.2-lb Z-sections are used for the center sill. The Continental cast-steel striker and front draft lug assemblies and the bolster center filler and rear draft lug assemblies are fastened to the center sill by welding them at longitudinal slots cut in the webs of the center sill Z-sections.

Draft gears are Miner RF333 friction rubber type used with Scullin vertical yokes, Positive draft key retainers, and with McConway & Torley Type E couplers. The single cross bearer (also forming the partition) and the body bolsters are built around ⅜-in. plates. Floors and hopper chutes are 5/16-in. material, and the sides are ¼-in. plate.

These cars have Enterprise hopper discharge valves and the eight roof openings are fitted with ¼-in. thick circular hatch covers.

Large Assemblies

The builder has installed automatic welding equipment which makes possible fabrication of such large assemblies as the complete sides. Intermediate side stakes are ¼-in. pressed steel, and the side posts at the bolsters are 9-in. channels. The complete side is produced by butt welding five separate sheets together, These sheets are also continuously welded to the 4 by 3½-in. bulb angle side plate and to the 6 by 3½-in side angle.

The trucks for these cars are fitted with Timken 6 by 11-in., heavy-duty, all-purpose, narrow-pedestal roller bearings. These bearings are installed in Scullin truck side frames. There are Scullin bolsters with Stucki single-roller side bearings. The cars have Barber S-2-A-O stabilizers. Checo unit-type brake beams are used. All the cars have Bethlehem axles and U.S. Steel 33-in. multiple-wear wheels. The hand-brake is a Miner non-spin type.

The entire exterior of the car was finished with one coat of duPont zinc chromate primer, and with two coats of duPont alkaline-resistant grey paint. The underbody was sprayed with Carey car cement, and no paint was applied to the interior of the car except the inside of the hatch covers.

With some changes in detail and specialty suppliers, similar 70-ton covered hoppers will be delivered by Greenville Steel Car to the Nickel Plate, Delaware & Hudson, Lehigh & New England, Tennessee Central and North American Car Corporation. Like the Western Maryland cars, the Nickel Plate cars will be roller-bearing equipped.

In Passenger Cars . . .

How Noise Can Be Controlled

AN OBJECTION to some of the new lightweight trains has been unfavorable passenger reaction to a noisy ride.

THE PROBLEM is to control (1) noise from within and (2) noise coming in from outside.

ANSWERS lie in proper application of absorbent and damping materials of different densities, to control varying noise frequencies.

Noise control is possible, provided the problem is approached and analyzed properly. The problem is essentially no different whether it involves the new lightweight trains or in so-called conventional equipment.

Noise from within in any car can only be handled by absorption. In the case of Pullman compartments this is accomplished by damping through the partition. A more important task is to stop noise from coming in, or to reduce it to a point where it is no longer objectionable. This can be done by lessening the noise transmitted through the floor, walls, ceiling, doors and air conditioning.

The absorption of noise within any one car is done by carpeting the floor, by drapes at the windows, by acoustic ceilings and walls and also by the angles of the surface of the car. Generally speaking, the more angles of deflection, the sooner the noise wears itself out, or is transformed to some other form of energy, which is usually heat. We therefore look for a material that is porous (soft), with many angles, such as certain types of insulation.

Noise, like electricity and light, travels in cycles, which cause different tones. The low tones, cycles or frequencies, are the hardest to control and absorb, but luckily this is the type of noise which most people tolerate best, and therefore, is the least of an engineer's worries. The functional sound absorbers, such as drapes, carpeting and manufactured types (such as Tone-Cones) have very little effect on low sound frequencies (25 to 250 cycles) as it requires mass to absorb these noises.

Medium low frequencies (250 to 2,000 cycles) are the speech tones, which are more annoying but fortunately are the easiest to absorb and control. The functional absorbers of lightweight and porous (soft) material are effective in these frequencies. As an example, noise in a bare room is annoying to the ear because it reverberates in and from all directions. When the room is furnished with carpets, drapes and furniture, however, conditions become satisfactory, and if it has additional angles to break up the sound waves and additional absorbers (such as a porous ceiling and walls) they are improved even more.

Medium Frequencies

The application of this knowledge to a railroad car is apparent. The problem is to increase the angles and soften the walls and ceilings. A corrugated perforated finish with an absorbent material backing, preferably of two or more different layers of different densities, accomplishes this. One product designed for such purpose is Acoustikill.

Medium high frequencies (2,000 to 4,000 cycles), are also annoying, as these frequencies fall within the audible range of some people. While functional absorbers are less efficient in this range than in the medium low frequencies, they do not pose as great a problem as it may seem. They are controlled in much the same manner as the 250- to 2,000-cycle range by decreasing the density and/or softening the material used as an absorber.

By R. A. DONIE
President, Donie Chicago Engineering Sales

Effect of Density

In the high frequency range (4,000 cycles and up), there is relatively no difficulty, since sounds in this range are audible to few people. The only reason for doing anything about these frequencies is because they may enter into harmonies with lower frequencies to make an objectionable overall tone. The flimsiest material possible is adequate to reduce such noise to a level where it is no longer bothersome.

A more difficult problem is noise coming through different component parts of a structure, and the damping of this noise as transmitted through walls, ceilings, doors and floors. Many of the qualities of a good absorber are also the qualities of a good structure. The damping of noise through a structure or partition is primarily dependent upon the weight and density of the wall or partition per square foot.

Since the medium and high frequencies are damped primarily by absorption on the surface, we can therefore state that a wall or partition that has a good damping factor has a soft, porous surface with an increasingly heavier backing material. An example is a well carpeted floor with a deep pile, mounted on a neoprene base of porous material, which need not be too thick. This is mounted on a heavier or less porous material, such as rubber or heavier felt paper of close weave and high density and

this in turn laid on a heavy and dense material.

In fabricating a partition, the same principle is followed. However, because noise is created on each side of the partition there should be a light material on the surface. A corrugated surface with a light density backing behind it and a heavier density of porous material behind this, with a solid sheet in the center, will form a partition that incorporates many of the best provisions for both a good absorbing surface and a high damping effect.

Compromises Required

There are several companies in the noise-control field that make this type of partition. While this may be more or less ideal, structurally, difficulties may be encountered in other considerations, such as maintenance, cleanliness, etc., which are objectionable and may lead to a moderate change in design.

Since pure transmission loss is directly related to the density and weight per square foot of a partition or wall, it becomes important that there be the minimum possible air or noise leakage.

A minute crack or leak can decrease many times the overall noise control value of a partition. Special effort should be made to seal by means of caulking compounds. Of course the treatment of walls and ceilings is similar to that of partitions and floors and the same precautions should be taken.

Certain holes through any outer casing are absolutely necessary, such as for doors and ventilating system. Doors can be sealed by proper care and design to eliminate trouble. The air-conditioning and ventilation system pose a different problem in that the air must pass freely into the compartments with as little pressure loss as possible. The development of such systems to require little space increases this problem in that there is a limited duct surface that can be treated for noise control. These high pressure systems make more noise than the low pressure systems. A number of companies have designed high pressure air-conditioning mufflers (such as Duct-Muffs) which are said to accomplish in a relatively small space as much damping effect as a standard lined duct 50 to 100 ft.

Other companies have brought out additional damping outlets. In short, with proper engineering, noise need no longer be a problem in passenger car construction.

Railroading After Hours with Jim Lyne

REPORTING ACCIDENTS—There are two outstanding Murray Campbells in the railroad business who I am happy to have as friends—the B&O's vice-president at Chicago, and the PRR's public relations practitioner at Philadelphia. I have a letter from the latter, on the subject I raised here recently—about whether it is sound practice to discuss accidents.

He tells of an experience he had when doing some historical writing for a gas company a few years ago. One of the company's officers lent him an illustrated book which recorded all manner of gas explosions. Some of the pictures were hand-sketched and were pretty lurid—showing people, vehicles and animals being tossed in the air.

MC says he asked his informant whether the gas industry has explosions like this nowadays. The reply was: "We never have had an explosion in our business—but we used to have *occurrences* from time to time."

ORIGIN OF "HOGHEAD"—President William White of the D&H wants to know whether I know how the term "hogger," for engineman, originated. In my younger days in Missouri and Kansas, the term was "hoghead," and I suspected, then, that the word had originally been "hogshead" and that it had been applied because so many of these fellows took on a lot of weight when they moved from the left side of the cab to the right.

However, "hog" has long been a term of affectionate derision for a locomotive—so what more natural than to call the engineman either "hoghead" or "hogger"?

One of the explanations WW sent to me on the origin of "gandy dancer" was that there once was a track boss named Gandy—a tough taskmaster who always kept his gang on the move. Gandy made them dance.

Cy Hankins of Wine Railway Appliance Company believes the big lettering palm should go to the Virginian since, he says, that road has used large lettering on its cars ever since its beginning.

DE-CONGESTING THE HIGHWAYS—I noted with enthusiasm, a few months back, that the Erie had begun to use the slogan "No Traffic Jam Here" to advertise its piggyback service. In our December 17, 1956, issue, page 47, we published a photograph of a billboard display which the SP is using along highways in the Sierras which carries the message: "Put the trucks on Southern Pacific." There certainly is an idea here which deserves wider application.

The railroads have many thousands of ready-made billboards in their highway overpass structures. Some of these give the name of the railroad—but most of them convey no information at all. Wouldn't it be promotional, if some railroad publicist would come up with a slogan (to be painted on all overpasses) which would convey, forcibly and in a few words, the message that the rail route provides the way of getting freight into and out of cities, economically and without jamming the highways? Any suggestions as to wording?

Such a slogan would, of course, not apply to piggyback movement alone, but would equally include all traffic moving by rail. Railroads have, on the average, been much less active in applying promotional terminology to their service than some of their rivals have.

(Continued from page 15)
1955. A big factor in this showing was the long and severe drought in the road's territory. Fifty-one of the 54 Texas counties served by the Katy are on the government list of drought-disaster areas.

Added to this has been the road's difficult financial position dating back to the 30's. Crux of the problem is the Katy's 7% preferred stock issue, on which accumulated and unpaid dividends now approach $160 a share. Attempts to recapitalize the road under the Mahaffie Act, and to clear up the dividend arrearages, have so far been unsuccessful.

The most recent proposal to accomplish this end is right now pending before the ICC. But this plan is already tagged with an examiner's recommendation that it be rejected.

Control of Katy's common stock rests with a syndicate including Pennroad, the State Street Investment Corporation, and Bear, Stearns & Co. The group bought up some 60% of Katy's common shares beginning in 1955, part of it at reportedly higher prices than the stock sells for currently.

This financial situation on the Katy, including dividend arrearages, will not be entirely new ground to Mr. Deramus. When he became president of the CGW back in 1949 that road, too, had a dividend pileup on the preferred stock. But this was much smaller than the Katy's ($2 million vs. $106 million), and the whole matter was cleared up by 1953.

No Change at CGW—Policies pursued by the Deramus management on the CGW are not expected to change significantly under the road's new chief executive. Following the announcement of Mr. Reidy's election to the top post, a spokesman for the Great Western said plans are to "continue . . . the same broad operating and managerial policies established over the past eight years."

Who's Who—As chairman of the Katy, Mr. Fraser continues a career with that road which began in 1916. He moved up through the purchasing department and became office manager, executive department in 1931. For a brief period in 1945 he served as executive assistant, then as vice-president for a month. On October 23, 1945, he was elected president of the road.

Mr. Deramus, 41, is a graduate of Harvard Law School (1939), and started his railroad career with the Wabash as a transportation apprentice. After army service in World War II he became assistant to general manager, Kansas City Southern, then in 1948 moved to the Great Western as assistant to the president. He became president of the road in 1949.

The new CGW president, Mr. Reidy, entered railroad service with the Baltimore & Ohio Chicago Terminal in 1921. He joined the Great Western in 1926, serving as clerk and secretary until 1941. Named assistant secretary of the company in 1941, he became secretary in 1948 and general manager in 1950. He was elected a vice-president in November 1952.

Magnuson Remains Head of Senate Group

Senator Magnuson, Democrat of Washington, will continue as chairman of the Senate Committee on Interstate and Foreign Commerce, a position which he held in the previous Congress.

Other majority [Democratic] members of the committee are: Pastore, Rhode Island; Monroney, Oklahoma; Smathers, Florida; Daniel, Texas; Bible, Nevada; Thurmond, South Carolina; and Lausche, Ohio.

Minority [Republican] members are: Bricker, Ohio; Schoeppel, Kansas; Butler, Maryland; Potter, Michigan; Purtell, Connecticut; Payne, Maine; and Cotton, New Hampshire.

Southern, New England Fare Increases Proposed

Southern railroads and New England lines were expected to file fare-increase tariffs with the Interstate Commerce Commission last week. If permitted to become effective, the tariffs would extend throughout the country the 5% increase which western railroads and eight eastern lines made effective early this month.

The way was paved for the filing of the southern and New England tariffs when the commission issued January 11 orders granting the necessary release from its tariff-publishing rules.

The southern roads planned to make February 20 the effective date of their tariffs, while the effective date of the New England increase was expected to be about the same time or a couple of days earlier. Under the commission's clearance orders, the tariffs will be subject to "protest, suspension or rejection."

The 5% increase would be applied generally within Southern territory to both coach and first-class fares. That would also be the situation in New England, except as to the Boston &

Slick Installs Truck-Air Moving Service

Sky-Van, a new truck-air service for moving household goods, was inaugurated January 7 by Slick Airways in cooperation with 28 warehousemen in principal cities. Packing, moving and delivery is included in the service, the company said, at prices equal to or lower than surface transportation. Specially designed aluminum containers are used. Each holds about 1,500 lb, and four are said to be sufficient to move an average household. The Chesapeake & Ohio recently acquired a substantial interest in Slick (Railway Age, Dec. 17, 1956, p. 66). Earlier, the Southern Pacific established an integrated truck-air freight service with three airlines, including Slick.

Maine, which proposes to increase first-class fares only.

Meanwhile, the 17 eastern roads, which were late petitioners for the 5% increase granted eight other roads in that territory, are sidetracked awaiting the filing of protests to their proposal. The protests are due January 23 (Railway Age, Jan. 14, p. 136). Presumably these 17 roads could still get their increases in as soon as the southern and New England lines, because their plea includes a request for commission authority to publish the necessary tariffs on short notice.

'Inflation Hurts Railroads the Most'

"Railroads are hurt more by inflation than any other business," F. G. Gurley, Santa Fe president, told the recent thirty-third annual meeting of the Mid-West Shippers Advisory Board in Chicago.

Inflationary forces in the nation's economy are constantly adding to the problem of obtaining the tremendous amounts of money necessary to keep railroads operating, Mr. Gurley continued.

Mr. Gurley said wage increases and increased costs of new equipment constitute a serious threat to railroad finances. "I don't know what we'll do about it," he commented. "Railroad rates will have to go up just as in any other business."

He predicted that recent union wage increases would amount to about 30 cents an hour at the termination of the three-year contracts.

"Particularly burdensome," he said, is the "mere matter of replacing freight cars." For a standard boxcar that cost $2,500 in 1930, railroads must now pay about $7,500. "When today we retire a 1930 freight car and purchase a replacement unit, we have available from our depreciation accrual fund only $2,500 with which to buy a car that costs an additional $5,000," he said.

To obtain the additional $5,000, railroads can look for capital funds from three sources—from investors, from borrowings, or from retained earnings, Mr. Gurley explained.

"Some other private enterprises are able to look to government subsidies to meet financial needs, but the railroads cannot, and for my own part I do not want them to," he declared.

More efficient use of present equipment, Mr. Gurley said, can ease the demand for freight cars somewhat. He remarked on the Santa Fe's system of trans-loading at Mahoney, Kan., by which westbound merchandise from needed box cars is transfered to empty refrigerator cars for through transit. The empties can then be released for routing to areas where demand is high. In this way, extra mileage was eliminated on more than 6,000 box cars last year through their early release at Mahoney.

RR Presidents Attend Shippers Meeting

Presidents of seven railroads attended the Mid-West Shippers Advisory Board luncheon in Chicago, January 10. Seated (left to right), are H. C. Murphy, Burlington; Fred G. Gurley, Santa Fe, who delivered the principal address, and Warren Brown, Monon. Standing (also left to right), are W. A. Johnston, Illinois Central; J. P. Kiley, Milwaukee; C. M. Roddewig, C&EI, and A. E. Perlman, New York Central.

AAR Vetoes Molygrease As Journal Box Lubricant

Grease containing molybdenum disulfide should not be used as an additive in journal boxes in place of car journal oil, the AAR committee on lubrication has ruled.

The committee reported that tests show molygrease clogs the fibers of lubricating pads, decreasing their efficiency. Other tests, it said, show a detrimental effect on the wicking qualities of journal box packing partially saturated with molygrease.

PRR Starts Fast Freights On Chicago-Louisville Run

A new Pennsylvania overnight freight service between Chicago and Louisville has been described by the railroad as "the fastest freight service ever operated between these two cities."

Two trains operating northbound on a 9½-hour schedule, and one southbound on an 11½-hour schedule, complete the daily service. The freights run non-stop except for crew changes at Loganport, Ind.

European Railway Car Finance Agency Organized

The European Railway Car Finance Organization recently was organized in Basel, Switzerland, according to a report, published in Foreign Commerce Weekly, from the U.S. embassy in Berne.

Directors of the organization, formed by 14 European railroad administrations, at their first meeting, approved financing contracts for freight-car purchases totaling 22.7 million Swiss francs, of which four million francs have been allotted to the Swiss Federal Railways for the purchase of 186 freight cars.

It is understood, the embassy report said, that next spring the organization, called "Eurofima," will undertake to finance purchase of about 2,000 freight cars for railroads of member countries.

November Accidents

The ICC has made public its Bureau of Transport Economics and Statistics' preliminary summary of railroad accidents for November and last year's first 11 months. The compilation, subject to revision, follows:

Item	Month of November		11 months ended with November	
	1956	1955	1956	1955
Number of train accidents*	790	797	8,622	7,892
Number of accidents resulting in casualties	50	56	485	449
Number of casualties in train, train-service and nontrain accidents:				
Trespassers:				
Killed	56	58	728	752
Injured	45	58	801	754
Passengers on trains:				
(a) In train accidents*				
Killed	..	..	32	4
Injured	5	2	962	400
(b) In train-service accidents				
Killed	...	...	6	11
Injured	121	136	1,513	1,581
Travelers not on trains:				
Killed	2	..	5	4
Injured	58	78	735	760
Employees on duty:				
Killed	23	23	222	223
Injured	1,521	1,673	17,242	16,585
All other nontrespassers:**				
Killed	141	225	1,243	1,381
Injured	610	621	4,733	4,895
Total — All classes of persons:				
Killed	222	306	2,247	2,375
Injured	2,360	2,568	25,986	24,975

*Train accidents (mostly collisions and derailments) are distinguished from train-service accidents by the fact that the former caused damage of $375 or more to railway property. Only a minor part of the total accidents result in casualties to persons, as noted above.

**Casualties to "Other nontrespassers" happen chiefly at highway grade crossings. Total highway grade-crossing casualties *for all classes of persons, including both trespassers and nontrespassers*, were as follows:

Persons:				
Killed	133	209	1,165	1,257
Injured	468	508	3,337	3,407

IC Training Program Will Develop 'Lower Echelons'

Development of management ability and leadership is the aim of a newly installed training program for Illinois Central operating officers.

The IC has appointed Frank R. Harrison as staff assistant to the vice-president to formulate and direct the program. Mr. Harrison is an industrial consultant and Northwestern University instructor.

The IC will one day "depend on the judgment and ability of officers now in the lower echelons of management," O. H. Zimmerman, operations vice-president, said, characterizing the program as one which would give these men training that will embrace the "whole panorama of the railroading business."

St. Paul Union Depot Opens Curb Ticket Office

"Most encouraging" is the phrase used by the St. Paul Union Depot to describe the reaction of the ticket-buying public to the company's recently opened curb ticket office. The new office, across the driveway from the main entrance to the company's station, permits a prospective passenger to order tickets by telephone, and then pick them up without leaving his car. The office was opened to the public last December 17.

MTMA To Be Operating by June 30

Organization of the new Military Traffic Management Agency will be "shaken down" and in full operation by June 30, Major General E. C. R. Lasher, agency chief, told the Atlantic States Shippers Avisory Board in Washington January 10.

General Lasher's luncheon-address review of the history and present status of MTMA shared the board spotlight with a discussion of railway mail handling by Herbert B. Brand, director of the Railway Mail Transportation Division of the Association of American Railroads.

Other highlights of the meeting included a prediction of a 4.8% increase in carloadings in board territory during the first quarter of 1957, and extended discussions on loss and damage and less-carload freight problems.

General Lasher, in describing what he called the "single manager" plan for supervision of traffic for all armed services, said the new Military Traffic Management Agency, with one headquarters office and eight field offices, will do work formerly done separately for the Army, Navy, Air Force and Marine Corps through five headquarters offices and 16 field offices. The headquarters office in Washington is already in operation, and field offices are scheduled to be established by April 1, which, General Lasher indicated, will allow ample time for completion of the entire organizational setup by the end of June.

To staff the smaller number of offices will require, he estimated, approximately 1,000 people. The number of military personnel will fluctuate as the availability of qualified individuals changes, but is expected to average about 10% of the total.

Establishment of MTMA was described by its commander as "a rather long and laborious process" but one

IC 'Arrests' Injuries With Safety Summons

"Illinois Central Railroad summons you and arrests your attention to safety," reads the realistic summons served on IC engineering vice-president Charles H. Mottier by patrolman George Pellar. The summons will be used to spark the IC's 1957 safety campaign. It charges that each employee make January 1957 an injury-free month and 1957 the railroad's safest year through the observation and practice of safe working conditions. Similar summonses are being served on each of the IC's employees.

accompanied by "a great deal of cooperation" on the working level. Its successful operation will eliminate many of the duplicate activities formerly carried out separately by each branch of the armed services.

Mr. Brand, speaking at the conclusion of the first general business session of the board meeting, pointed out many ways in which carriage of mail by railroad differs from its movement by other forms of transportation.

J. Robert Morton, general traffic manager of Vega Industries, Syracuse, N. Y., was elected president of the board, to succeed Clarence S. Decker, of New York, general traffic manager of the Borden Company, who becomes chairman of the executive committee. Other officers elected were Robert A. Cooke, New York, manager, traffic department, American Newspaper Publishers Association, first vice-president; Roger C. Avery, Rochester, N. Y., manager, claim division, traffic department, Niesner Brothers, second vice-president; and D. H. Smith, Jr., general traffic manager, International Salt Company, Scranton, Pa., general secretary.

Allowances May Be Paid for Trailers

The Interstate Commerce Commission has ruled that a shipper-owned trailer is a "transportation instrumentality" for which an allowance may be paid by a railroad using such trailer in piggyback operations.

The ruling upset previous commission determinations to the effect that shipper trailers were containers. On that basis, they could neither be rented by railroads nor even returned free of charge when empty, but this theory has never been applied.

The reversal came in a commission report on reconsideration of a case (I&S No. 6340) involving a Chicago & Eastern Illinois proposal to allow shippers 18½¢ per 100 lb in lieu of pick up and delivery on, and for furnishing trailers for their own piggyback shipments. The commission's endorsement of the allowance plan embodied a condemnation of the allowance proposed. In that connection, the report said:

"If publication of any allowance covering this service is continued, a tariff provision should be incorporated in the tariff requiring the return to the respondent at destination of the empty trailer within a reasonable time after delivery or tender of delivery of the shipment, for return movement of the trailer to point of origin. We think also, since what is done here might serve as a precedent in other similar instances, that it would be more appropriate to base the separate allowance, if made, for the use of the trailer, upon mileage rather than weight of the lading in the trailer.

"Our findings herein are not to be construed as an effort to discourage the type of service contemplated by this allowance, and are without prejudice to the filing of new schedules embodying allowance or allowances which the respondent is prepared to justify upon a comprehensive record."

Separate expressions came from Commissioner Murphy, concurring, and Commissioner Hutchinson, dissenting. Commissioner Walrath joined in the Murphy expression, while Commissioners Winchell and McPherson concurred "in the result" of the majority decision.

Commissioner Murphy's concurrence was confined to that phase of the majority report which condemned the proposed allowance and its form. He did not subscribe to what he called the "novel theory" that trailers used in piggyback services are transportation instrumentalities. "Not least" of the results stemming from that determination, he said, "is doubt as to the legality of operation of all rail carriers engaged in trailer-on-flat-car service which have not obtained certification for such operation under Part 2 of the act."

The latter recalled one of the commission's early rulings on piggyback operations, which was to the effect that transportation of freight in trailers on railroad flat cars is transportation by railroad, for which a motor carrier certificate is not required. That ruling still prevails.

Commissioner Hutchinson's dissent in the present case was based on his disagreement with the majority's finding that the proposed allowance of 18½¢ per 100 lb was unreasonable. He would have approved an allowance equivalent to that amount, subject to conditions that it be amended to reflect separate allowances for pickup, delivery, trailer rental, and a unit of mileage rather than weight or time.

11 Months' Net Was Down $51 Million

Class I railroads in the first 11 months of last year had estimated net income, after interest and rentals, of $777 million, according to the Bureau of Railway Economics of the Association of American Railroads.

That was a decrease of $51 million below the $828 million reported for the first 11 months of 1955. The estimated net income for November 1956 was $68 million, down $13 million from November 1955's $81 million.

The 11-months' net railway operating income, before interest and rentals, was $982,530,448, off $68 million from the comparable figure, $1,050,339,559, for the first 11 months of 1955. November's net railway operating income was $87,759,592, compared with November 1955's $103,152,048.

Fourteen Class I roads failed to earn interest and rentals in last year's first 11 months. The rate of return for the 12 months ended with November averaged 3.93%, compared with 4.34% for the previous 12 months.

CLASS I RAILROADS—UNITED STATES

Month of November

	1956	1955
Total operating revenues	$ 887,604,728	$ 874,083,272
Total operating expenses	687,121,522	656,321,211
Operating ratio—per cent	77.41	75.09
Taxes	92,693,734	94,848,739
Net railway operating income (Earnings before charges)	87,759,592	103,152,048
Net income, after charges (estimated)	68,000,000	81,000,000

Eleven Months ended November

Total operating revenues	$9,679,887,374	$9,248,579,953
Total operating expenses	7,418,974,356	6,946,596,492
Operating ratio—per cent	76.64	75.11
Taxes	1,047,051,241	1,018,671,666
Net railway operating income (Earnings before charges)	982,530,448	1,050,339,559
Net income, after charges (estimated)	777,000,000	828,000,000

CPR Strike: What Did It Settle?

(Continued from page 10)

Who's a Lookout?—The fireman wouldn't be needed to help maintain a lookout from the cab of a freight train, the road pointed out; he never could be assigned that task in steam days because his primary responsibility kept him down on the deck much of the time. Being a lookout was a job for the head brakeman, who would remain as a second man in the cab.

Where would future enginemen come from? The ranks of passenger helpers, where they come from now, the CPR maintained.

What would happen to displaced firemen if the CPR made its point? Turnover within the "running trades group" alone would absorb all those displaced.

What would the CPR gain dollarwise? Half dieselized, as it was at the time of the hearing, about $5 million yearly; when dieselization is complete in 1961, about $10.7 million a year.

Now is the time, the CPR declared, to settle the issue, when roughly one out of every two locomotives is a steamer and needs a fireman. Let's not prolong the determination, it urged, while the impact of dieselization grows.

On that point and others, the chairman and company nominee on the conciliation board agreed. Principal recommendations they sent to the labor minister were that:

- Firemen on road freight and yard diesels be considered unnecessary, though all firemen with three years' seniority or more be given full job security;
- Firemen with less than three years' seniority be offered other jobs without reduction of pay or loss of their place on the firemen's seniority roster;
- Severance pay of 1½ months' wage for each year of service be given firemen who elect to leave;
- Yard firemen be paid for six statutory holidays;
- Wages and other allowances be increased 12%;
- Firemen not be used on self-propelled cars.

Union Rejects Report.—The CPR accepted the majority report with some reservation (it could have been "more favorable"), and announced four days before Christmas that it was willing to get together with the brotherhood to work out details. The same day, the union turned thumbs down on the report—as it had said beforehand it would probably do—and announced a strike vote.

CPR's President N. R. Crump proposed that the diesel issue be taken before an independent tribunal while trains continued to run—so long as the tribunal's determination be final and binding. We'll work, said Mr. Gamble, if the CPR will settle on the basis that other roads did and will quit pushing the diesel issue.

The strike was voted (by the general chairmen) and the CPR's firemen walked out January 2.

The Canadian Pacific put its trains away. Seventy thousand employees went home and stayed. Commodities began to pile up in the prairie provinces where the CPR was the only outlet. Industry began to lay off workers.

The president of the Canadian Labor Congress proposed a seven-man board to look into the whole question of automation and labor displacement: Mr. Crump declared he would not accept "sugar-coated" proposals which would only delay determination of the diesel issue. He'd accept another investigation of the matter, he said, but it had to culminate in compulsory arbitration.

Three feet of fresh snow covered parts of the CPR's track. The president of the Canadian Manufacturers Association was anxious that the strike be settled as early as possible, but not at the price of "feather-bedding."

The CPR had been struck for about a week when the Canadian press began to hint that perhaps labor's proposal to study—and therefore delay—the diesel issue might win out, the way things looked in Ottawa. And on January 11, after three days of talks, the CPR and its firemen did reach agreement on a proposal by the Prime Minister that firemen temporarily be granted a 12% wage increase—while the diesel issue went to an independent tribunal of three judges. The trains could run again.

Who won? Nobody, yet. The firemen didn't want the diesel issue settled, and as yet it isn't—although the union wasn't too happy about the establishment of a board with no union representatives. The CPR wanted compulsory arbitration on the issue and didn't get it, though evidently it came away satisfied that what Mr. Crump called a "judicial determination" of the matter would be the next best thing to a court decision.

The firemen's strike lasted nine days and one hour. It cost the CPR an estimated $14 million in revenue and the idled employees $7.5 million in wages. As yet, it has proved perhaps only that public opinion seems to be behind management's efforts to control its labor force—where locomotive firemen are concerned, at least.

The board has until October 1 to turn in its report. What it will recommend, and how both management and union will react, of course remains to be seen. The firemen's union already has indicated that it probably won't like what the judges decide.

But what ever else may be said, it's pretty certain that public acceptance of the CPR's position that firemen have been "automated" out of a job will be remembered when the CNR's contract comes up in 1958—and when U.S. railroads sit down at the bargaining table with the firemen.

NYC to Launch Own TOFC Version Soon

The New York Central's wholly owned trucking subsidiary—the New York Central Transport Company—will be the medium through which this railroad, a long time hold-out from piggyback ranks, will finally enter trailer-on-flat-car operation.

Details of the move are still being processed. Date for inauguration of the service has not been announced, but it will start in the near future.

The service—which Central officers say will be a fully integrated, complete highway operation—will in no way resemble common-carrier piggyback service offered by many other roads.

New York Central President A. E. Perlman has long been an outspoken opponent of common carrier TOFC, declaring that railroads participating in such an operation actually help competing truckers.

It is Mr. Perlman's view that common carrier piggybacking permits truckers to take advantage of the railroads by utilizing their flat cars on weekends, rather than pay truck drivers overtime wages—thus reducing railroads to a status in which they provide a standby service for their chief competitors.

New York Central Transport Company has been rapidly expanding its truck fleet in recent weeks, with plans to continue the expansion. Actual form of the TOFC service contemplated has not been made public—but it is expected to be something completely new in the field.

The trucking company is authorized to provide substitute freight service for the railroad in many states and is now moving into Ohio, Indiana, Illinois, Michigan, New York and New England. Railroad spokesmen stress that this operation is performed exclusively on New York Central Railroad rights.

As the integration of truck and rail service develops, the Central's trailer-on-flat-car service will be provided throughout virtually its entire system. The trucking arm, organized last summer, is reported to be already well on the way to completely supplementing the work of the railroad. It contemplates a complete service of transferable loads to offline shippers and receivers.

The trucking company will perform all over-the-road services for the railroad, subject to so-called "key point" restrictions. Among other developments seen as highly possible, is that the trucking subsidiary will take over mail-carrying services which are felt to be hampering some of the Central's passenger operations.

SIX-YEAR CTC SCHEDULE TO COST NYC $43,000,000

Centralized traffic control projects immediately projected or already underway on the New York Central will cost $43,000,000—the work to run through 1962.

John F. Nash, vice-president, operations, announced this during ceremonies at Erie, Pa., last week, marking the official opening of the Central's 63-mile, $6,000,000 stretch of CTC track between Cleveland and Buffalo (Railway Age, November 21, 1955).

NYC President A. E. Perlman told reporters the road plans to convert its entire system to CTC, with the gross cost of projects underway coming to $25,000,000 and the 1957 budget allocating $18,000,000 more. He said the railroad intends to have 3,665 CTC miles by 1963.

C. Harry McGILL
NYNH&H

Alan T. Danver
Rutland

People in the News

AKRON, CANTON & YOUNGSTOWN. — **Joe E. Savely,** manager industrial development, Akron, Ohio, appointed also assistant to president.

ASSOCIATION OF AMERICAN RAILROADS. — **Thomas W. Flickinger,** district manager, Car Service Division, St. Louis, Mo., appointed manager, Open Car Section, Washington, D.C., succeeding the late **William E. Callahan** (Railway Age, Jan. 14, p. 148). **John H. Blose,** district manager, Detroit, Mich., succeeds Mr. Flickinger at St. Louis; **H. G. Randall,** district manager at Boston, Mass., replaces Mr. Blose at Detroit and **C. A. Lauby,** assistant to manager, Closed Car Section, Washington, succeeds Mr. Randall at Boston.

CANADIAN NATIONAL. — **Jack J. Thornton,** manager, news bureau, Montreal, appointed assistant to director of public relations and will undertake several special assignments with special emphasis on community relations. **Ainslie Kerr,** supervisor of press and radio news, succeeds Mr. Thornton as manager, news bureau. **Charles A. Harris** appointed assistant director of public relations. Because of a printer's error in Railway Age (Jan. 7, p. 39), Mr. Harris' name was printed as Charles R. Harris.

CHESAPEAKE & OHIO. — **W. H. Pollard,** assistant engineer, Richmond, Va., appointed division engineer at Newport News and Norfolk terminals in charge of maintenance and construction, with headquarters in Newport News, Va. **R. H. Abbott** named division engineer, Richmond division, exclusive of Newport News and Norfolk, in charge of maintenance of way and construction, with headquarters in Richmond.

NEW HAVEN.—**C. Harry McGill,** manager of purchases and stores, New Haven, Conn., appointed acting chief of operations, with the maintenance of way, maintenance of equipment, and transportation departments reporting directly to him. **Robert W. Hooper** appointed acting general mechanical superintendent, reporting to Mr. McGill.

NEW YORK CENTRAL.—**Robert W. Lemon** appointed division freight sales manager, Youngstown, Ohio, succeeding the late **Fred P. Sandford.**

PENNSYLVANIA. — **Lynn A. Pelton,** assistant engineer of tests, maintenance of way, Altoona, Pa., appointed district engineer, Fort Wayne, Ind., succeeding **Paul J. Harnish,** advanced to assistant regional engineer, New York Region.

RUTLAND.—**Alan T. Danver** elected president and a member of the board of directors, effective February 1, succeeding **Gardner A. Caverly** (Railway Age, Jan. 7, p. 40). Mr. Danver was formerly executive assistant, treasurer, secretary and clerk of the corporation. He was born in Stamford, Conn., joined the Rutland in 1925 and held various positions in the engineering department.

SOUTHERN. — **John V. Johnston,** commercial agent, Detroit, Mich., promoted to district freight agent, Cleveland, Ohio, succeeding **John H. Blair,** whose appointment as general agent, freight and passenger departments, Boston, was noted in Railway Age, Jan. 7, p. 40.

SOUTHERN PACIFIC.—**Robert D. McIntyre,** advertising manager of SP's lines in Texas and Louisiana, Houston, appointed assistant advertising manager, SP, San Francisco, to succeed **J. Robert Lehmann,** resigned. Mr. McIntyre's successor is **Charles R. Dunn, Jr.,** assistant advertising manager, Houston.

UNION PACIFIC.—**Fred C. Bell,** general agent freight department, San Francisco, appointed general traffic agent there.

OBITUARY

George McLean, president of the **San Luis Central** at Denver, Colo., died December 15, 1956, at his home in that city, after a long illness.

Thor A. Thompson, retired vice-president and secretary of the **Denver & Rio Grande Western,** died January 2 at Denver, Colo.

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Who Are Labor's Friends?

THIS RELATES TO:

1—Challenging competition
2—Holding to high service standards
● 3—Increasing internal strength
4—Getting a higher level of earnings
5—Improving tools and methods
6—Seeking a friendlier environment

You don't prove your real regard for a child, or for one of your best friends—or for a labor union—by giving in to them on anything and everything they may take it in their heads to ask for.

It may well be that the Canadian Pacific—by resisting to the best of its ability the employment of "firemen" on locomotives where there is no necessary work for them to do—has been acting in the long-run interest of all railroad employees.

Similarly, the courageous, costly, and thankless litigation that the Santa Fe is carrying on against the so-called "union shop" is quite likely a fundamental effort *in behalf* of unionized employees, rather than against their interests. There are, of course, persuasive arguments against the practice of "free-loading" by employees who resist unionization—and who enjoy most of the benefits of union activity without sharing in the expense. But is not the minor advantage unionists get from compelling the "no-bills" to pay their way a great deal more than counterbalanced by unionists' loss of control over their leaders?

The Right to Resign

There is no more powerful weapon against tyranny than the right of resignation. The principal merit of competition in business is the freedom it gives consumers from dependence on any one supplier of the necessities of life. If the housewife does not like the prices or the service at one market, she is free to take her trade somewhere else.

If there is one union, and one union only, that a man has to join—and be subjected to and pay dues to—if he wants to hold his job, then what complaint can this union have if it is brought under government regulation, like any other monopoly?

Unionists who are inclined to look upon Messrs. Fred Gurley or J. C. Gibson of the Santa Fe as "unfriendly to organized labor," because of the Santa Fe's litigation against the union shop, would be better advised to suspend judgment for a few decades. It could very well be, if the Santa Fe's court action succeeds—and unionism is again subjected to the discipline of control by its dues-paying members—that the nation's unions may avoid the stifling restraints of government regulation. But, if they are to become unquestioned monopolies, how will they long avoid the regulation to which other monopolies are subjected?

It would be strange indeed—seeing how the organizations that supply us with telephone or electric service at a price of $5 or so a month are regulated—if a monopolistic organization that governs our entire livelihood were able to escape the heavy hand of the regulators.

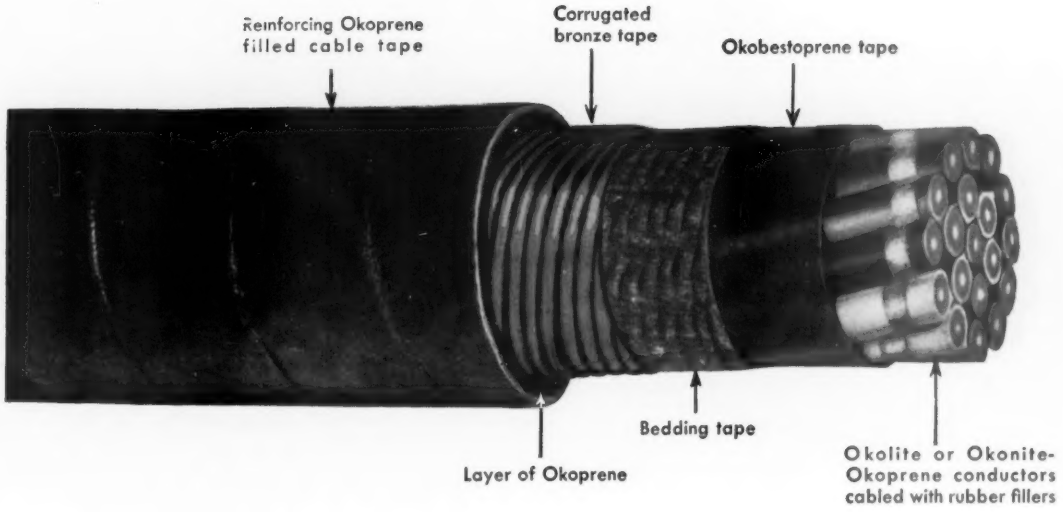
On the matter of so-called "featherbedding," there is always bound to be a difference of opinion. What to management looks like a "make-work" job may appear to the fellow holding that job as a necessary provision for public safety. But such differences in opinion can be equitably resolved by leaving the decision to competent observers from the "outside."

Managements suffer from an undeserved reputation of seeking to "destroy jobs." Some managers, themselves, hold this erroneous view of their function. Actually, competent management never "destroys jobs." Instead, what it does is to take the money being used for unproductive labor and divert it to employing people in productive work.

If some switching jobs are done away with by installing an "automatic" yard, does that mean that these jobs have vanished? Of course it does not. The money formerly used to pay switchmen now goes to the people who make and maintain the automatic equipment—and some of it goes, or should go, into rate concessions, which will build traffic, thereby protecting and increasing other railroad employment. Some of the savings should go to investors, to attract more of their savings into the railroad business—enabling the railroads to improve their equipment and service, still further strengthening the overall security of railroad employment.

Resisting Progress

Dispensing with excess employees in any given occupation isn't contrary to the interest of employees as a whole. On the contrary, it is the only sure protection of long-run security in any railroad job. This doesn't make the displacement of specific employees any easier on *them,* however. And it is just and right that every effort be made to transfer them to other work or other locations. Progress is impossible without changes in job assignments—and so-called "featherbedding" is usually a form of resistance to the changes incident to progress. Such resistance is invariably penalized—and sometimes the penalty is extinction.



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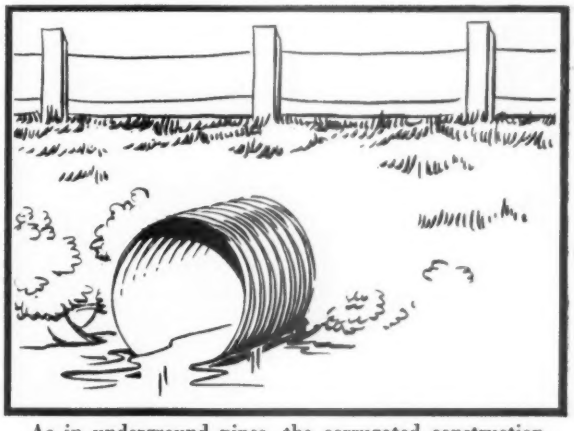

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